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EDITORIALS

Watch Your Neighbor

WHENEVER a "Mutual Admiration Society" meets in the pulp and paper industry, the subject of all the marvelous new uses for pulp and paper usually is brought up.

We wonder if it wouldn't be a good idea to just occasionally give some consideration to the fact that the textile industry and the light metals industry have not been asleep during the recent war years. They, too, talk about their new products, which they may now make in unrestricted quantities. Many of these products will be in direct competition with the new products of the pulp and paper industry.

For example, the new nonspun and nonwoven cotton cloth, made in a roll press with an overprint of liquid plastic. It is used for dental towels, diapers, milk filters and linings of all kinds. These are throw-away items for which paper had been used extensively. The new products are said to be softer than the paper ones, of greater wet strength than paper—even cheaper than paper. Napkins, tablecloths, curtains, etc., can be made the same way.

"Pulpwood Buzzards"

LAST month we interviewed E. Palmer Hoyt, publisher of the Denver Post and one of newspaperdom's leading lights today. He said: "I think you ought to write a piece on the short-sightedness of newspaper publishers—it forced machines into other types of production."

Our readers know we already had published several such articles. They drew upon us some fire from certain sanctums of the daily press, accusing us of such unfriendliness toward them that we almost felt ashamed of ourselves . . . until we read this in the New York Herald-Tribune, quoting their "pet" cartoonist, "Ding" Darling:

"My God, are they going to cut over the Adirondacks again! I didn't suppose they would cut that second-growth timber in the Adirondacks and call it building material—or perhaps it is the *pulpwood buzzards* who are going to trim it off this time."

If 't'weren't for the "buzzards," Ding might be a stone-chiseler.

We said, and we say again, that the big magazine publishers who are now moving into the position in the paper industry once held by newspapers, are showing much more sympathy, understanding and cooperation for the paper industry than did their predecessors.

CROSSETT PAPER MILL IN CROSSETT, Arkansas, has one of longest lime kilns in industry—about twice average length in South and some other regions—which it operates on less BTU's per ton. It has other advantages of importance to this mill.
Upper view: 300 ft. long, 7 ft. diameter kiln. Lower view: Limestone aggregate is unloaded by clamshell dredge and hoisted to top of lime kiln feeding structure by mechanical feed.
For mill like Crossett, where lime is not close at hand, outdoor storage of stone, which won't deteriorate as does lime, has advantages. Lime is still brought in for bleach plant and this is emergency supply in case of kiln trouble. East coast Southern mills burn oyster shells for lime.

CROSSETT EXPANSION = BETTER BALANCE

Expansion of the production facilities of the Crossett Paper Division of Crossett Industries, Crossett, Ark., so as to develop the utmost in a balanced operation has been resumed following the interference of war time restrictions. It is stressed by company executives that such changes as are being made are part of the long range plans for the mill.

Beginning at the originating stage, the company has installed an 800-foot wood conveyor. This is comprised of a V-shaped trough through which the wood lengths are moved by a steel cable having engaging buttons at 4-foot intervals. About 500 feet of this conveyor is level so that pulpwood can be unloaded direct (without rehandling) from truck or railroad car. A portion passes the pulpwood pile where a crane can service it from ground storage.

Next in line was the installation of a new Murray barking drum and a 96-inch Murray chipper. The company has a CPA approval for an extension to its wood pulp building.

Power to take care of these and other additional facilities is provided for by a new 5000-hp. Westinghouse turbo-generator, installation of which has been effected, and a further installation of a 6000-hp. Westinghouse turbo-generator is scheduled. Also to be added in this department is a 100,000 lbs. per hour Babcock & Wilcox power boiler.

Recently completed has been a new Combustion Engineering Co. recovery boiler, the fourth installed in the plant. This new installation included a Cascade evaporator, and the Crossett company also has had installed three of the same type of evaporators to bring the original recovery boiler installations to a par with the new unit.

Cooking capacity is to be increased 25%.

Now in final stages of completion is the bag plant of the Chase Bag Co., which leased 6½ acres from the Crossett Paper division. The plant is of one story brick and steel construction measuring 175 by 400 feet. A complete line of paper shipping sacks will be produced from kraft paper to be bought from Crossett.

Further work to be accomplished in 1946 will include additions to the bleach plant. The program as a whole is directed to quality improvement and cost reduction, but will also result in some productive capacity increase.

Long Lime Kiln Is More Efficient

Operation of its 300-foot lime kiln, which compares with a "standard" 150-foot length in the pulp and paper industry, has brought a satisfactory experience to the Crossett paper mill, at Crossett, Ark., division of Crossett Industries. Comparable BTU consumption figures show evidence of high efficiency.

The 300-foot length kiln is 7-foot in diameter and is mounted on one drive and four bearing trunions. It is turned through a drive furnished by Falk Corp. with power from a Westinghouse electric motor, with an International gasoline engine to start it in operation. Temperatures at three points along the kiln are automatically recorded on Foxboro instrument charts in the fire-room. The first or upper end temperatures are regulated to 600 degrees Fahrenheit and the firebox temperature ranges between 2200 and 2600 degrees Fahrenheit.

Natural gas is used in the kiln at 150 lbs. pressure, and the volume is regulated by valve in the fire-room according to the fluctuations of the upper temperature reading, which reflects the amount of material feeding down through the kiln. The gas combustion area extends upward to 40 feet. The kiln consumption runs from 20,000 to 30,000 cu. ft. per hour (1000 B.T.U. per cu. ft.).

The Crossett lime kiln has been burning 8,250,000 BTU's per ton of lime, as compared with averages in the pulp and paper industry's lime kilns of from eleven million to thirteen million and in some cases as high as sixteen million BTU's in the shorter units.

Another feature of the lime kiln operation at Crossett is the reduction of limestone aggregate rather than purchase of the lime itself to replenish the supply. This method of operation presents some distinct advantages, one being that stocks of as much as 1000 tons (equivalent to 500 tons of lime) may be brought in and stored in the open without deterioration.

This aggregate or crushed limestone is received on a spur track alongside the feeding end of the kiln. It is unloaded by means of a Northwest Engineering Co. (Chicago, Ill.) clam shell type crawler track mounted unit. As needed, this unit drops the aggregate into a hopper serving a belt conveyor in an underground chamber. The belt feeds a Jeffrey Manufacturing Co. bucket elevator which fills the hopper on the top of the structure. The top hopper has a sufficient capacity to serve the kiln for a 24-hour period.

As a leveling process, Crossett purchases about one carload per week of lime, largely for the bleach plant. Prior to building of the kiln, with its limestone supply, the company bought three or four carloads of lime each week. In emergency, the bleach plant supply can be used. The use of aggregate eliminates the need of investment in lime storage capacity, as well as unpleasant handling and possible loss through deterioration.

The lime kiln was erected for the Crossett company by the Traylor Engineering Co., Allentown, Pa., whose experience with long kilns in the cement, aluminum and chemical industries was made available to the paper mill. K. O. Elderkin, manager of the Crossett Paper Division, a McGill University graduate in engineering, discerned the advantages of the long kiln, and installation was ordered.

KRUG WANTS DECISION SOON ON ALASKA TIMBER CLAIMS

In the first statement he has made for publication on the question, Interior Secretary J. A. Krug told PULP & PAPER INDUSTRY on June 17 that he wants to get a federal decision as soon as possible to settle, one way or the other, Indian claims to Tongass National Forest lands in Alaska.

Mr. Krug's predecessor, former Secretary Ickes had awarded Indians exclusive use of 273,000 acres of land in the forest area last July after a hearing before an Ickes-appointed examiner.

For many months, the uncertainty as to these and other Interior Department-instigated Indian claims in Alaska hung like a dark cloud over the efforts the Department of Agriculture (Forest Service) to interest private industry in pulp and paper manufacturing in Alaska. The Indians are wards of the Interior Department. Granting their claims would, in effect, give Interior Department control over use of Forest Service land.

In his first statement on the subject, Mr. Krug told this magazine:

"The Indians probably have some sound theoretical basis for the claims. I do not want to waive any Indian rights. But I feel this is a matter which should be settled by the courts. The courts should act as soon as possible."

Asked if he had reference to action by the U. S. court of claims, he said rather that he wanted "a clear cut case" tested in a federal court. Approval of the Interior Secretary would be necessary before bringing such cases into the court of claims and Mr. Ickes would not give his approval during his term. Mr. Krug did not commit himself on this point, but stressed the desire on his part for federal court action, to be initiated by industry—preferably a fisheries industry whose operations have been threatened.

The coastal areas granted for exclusive use to the Hydaburg, Klawok and Kake Indian tribes last July were not in the best and most available stands of pulptimber, but parts of them were in the five "allotments" mapped by the Forest Service, each one designated as capable of perpetually supporting a pulp and paper mill (map on p. 34, Aug. 1945 PULP & PAPER INDUSTRY, shows Indian grants). This is the only suitable timber in Alaska and under Forest Service rules it must be at least made into pulp before export.

Mr. Ickes denied claims of Indians to land areas about equal to those granted to them. He reserved judgment on much more extensive areas. Mr. Ickes always held his decisions were final and not subject to review by courts. All negotiations between the Forest Service and pulp and paper operators ceased when Mr. Ickes brought up the Indian question.

His Views on Park Timber

Mr. Krug also told PULP & PAPER INDUSTRY that he was, for the present at least, against allowing any logging in the extensive Olympic National Park in Washington State.

Before coming west, Mr. Krug had stated in a letter to W. E. Crosby, forestry editor of PULP & PAPER INDUSTRY, that only Congress has the power to permit even selective harvesting of national park timber. Mr. Crosby had written for information. Mr. Krug released his reply for publication and it appeared in many newspapers.

After arriving in Washington state, Mr. Krug amplified his letter by declaring that he was himself opposed to proposing action by Congress. He said only 1% of national timber resources were in national parks and said "what we have to get is more efficient utilization of the timber outside the national parks."

The issue has long smoldered over the park timber because it comprises a huge proportion of timber economically available to pulp and paper and other forest-using industries on the Olympic peninsula, despite Mr. Krug's "1%."

In taking his stand against its use, Mr. Krug said "once logging is introduced in the park—no matter how selective—the delicate balance of nature is disrupted."

Park use advocates have contended that the National Park system has already "unbalanced nature" by eliminating fires and in Yellowstone and elsewhere, by protecting animal life beyond ability of park to support it, etc. They want the right to log old timber in the park before it dies and rots.

THIS MAN, KRUG — —

Interior Secretary Julius A. Krug, who answered questions presented by PULP & PAPER INDUSTRY on Alaska timber and Olympic National Park timber availability, as reported in this article, is well over 6 ft. tall, weighs 250 lbs. and is 38 years old. He's ruddy and husky in appearance, very affable, a good listener as well as a good talker.

Born and raised in the second biggest papermaking state of the nation, Wisconsin (after New York), he said one of his favorite spots in his home town of Madison is the U. S. Forest Products Laboratory located there.

"I used to go to it way back when it was on the University of Wisconsin campus, before it grew. I'd like to see some of its products used commercially. I'd also like to see a lab like that in the West."

Before joining the War Production Board in Washington, which he headed until it folded, Mr. Krug had served on Wisconsin's Public Service Commission.

Ketchikan Is Out For Paper Mill

Ray Roady has been named permanent chairman of a committee of Ketchikan, Alaska, business men who say their goal is to attempt to interest Puget Sound pulp and paper manufacturers in erecting a plant in the vicinity of Ketchikan, using National Forest Timber.

Crown Z Plants 585,000 Seedlings

A total of 585,000 tree seedlings were planted on six of the eight tree farms of Crown Zellerbach Corp. during the recent planting season.

Chief Forester Clarence Richen of Portland, Ore., said the company was able to maintain a fair level of planting during the war due to co-operation of Washington and Oregon high school boys. More recently sufficient manpower has been mustered for planting of practically all the available trees. Mr. Richen said the company has ordered about one million seedlings for the next planting season which begins in the Fall of 1946.

Forest Brainerd Tours Scott Coast Mills

Forest Brainerd, chief chemist at Scott Paper Co., Chester, Pa., and vice president of Coos Bay Pulp Co., Scott subsidiary at Empire, Ore., visited the latter mill in early July. He then went north for a look at the Anacortes, Wash., division of the same company.

"Three times a year is par for the course on western trips," says Mr. Brainerd. "But an annual trip is more convenient."

AT PERKINS-GOODWIN anniversary dinner in Waldorf-Astoria, New York:
Top (left to right): LOUIS CALDER, President, Perkins-Goodwin Co.; LEMUEL B. SCHOFIELD, Director, Philadelphia Daily News; REUBEN B. ROBERTSON, President of APPA and Exec. Vice Pres. of Champion Paper & Fibre Co.
Lower group (left to right): JOHN EWING, Louisiana publisher; ERNEST L. KURTH, resident, Southland Paper Mills, Lufkin, Tex., and RICHARD W. WORTHAM, Jr., Exec. Vice Pres. of Southland.

INDUSTRY LEADERS PAY TRIBUTE TO PERKINS-GOODWIN CO'S 100 YEARS

One hundred years ago in July a young man named Coe S. Buchanan came down from Saratoga and set up a paper jobbing business at 120 John Street in New York City. The United States was only 70 years old. There were not more than 400 mills, and they were small.

This month, a century later, more than 700 friends gathered in the Grand Ball Room of New York's famed Waldorf-Astoria to join in celebration of the first centennial of the organization that Buchanan founded, the Perkins - Goodwin Company, one of the leading marketing and management organizations in the pulp and paper field.

These guests came to pay homage not only to the memory of Mr. Buchanan, and to the company he founded, but to a living man who has been with Perkins-Goodwin for half of its hundred years and its president for the past twenty-five. The man is Louis Calder, who gave up selling newspapers in Montclair, N. J., to become an office boy at Perkins-Goodwin at four dollars a week. As speaker after speaker reflected the qualities of the organization and its president, it became increasingly apparent that Lou Calder has loomed large in the minds of men in many phases of the industry, not least in the southern newsprint industry.

Today the company's gross sales amount to 40% more than the total paper production of *all* the mills in the U. S. 100 years ago. Operating from headquarters at 30 Rockefeller Plaza in New York, the company has branch offices in Chicago; Lufkin, Texas; and Stockholm, Sweden.

Lemuel B. Schofield was the amiable toastmaster. He is publisher of the Philadelphia *Daily News*, and former director of public safety in Philadelphia. A lawyer, he was also special assistant to the attorney general in charge of the Immigration and Naturalization Service, Department of Justice. "Few companies," he pointed out, in his introductory remarks, "are strong enough, sound enough, and are led wisely enough, to last for one hundred years."

Charles A. Gordon, a director of Oxford Paper Co., brought some statistics to bear on the same thought in his address. Out of 3,000,000 companies which began life beyond a century ago, not more than 300 exist today. In a vein of sincere humor he said that he had the authorization of Oxford's president, Hugh Chisholm, to invite "all those present here tonight to Oxford's first hundredth anniversary." Oxford is 46 years old.

Reuben B. Robertson carried greetings and congratulations of the American Paper and Pulp Association which he heads, adding his personal felicitations as executive vice president of Champion Paper & Fibre Co.

Geo. G. Winlow, director of sales for E. B. Eddy Co., Ltd., brought the pleasure of Canadian industry at the illustrious milestone passed by the company.

L. Nylander, Swedish Consul-General, gave the party its international note. He touched on import question and invited attention to Sweden's lack of coal for pulp production. However, he stated the situation was improving.

(Continued on page 66)

This photo by PULP & PAPER INDUSTRY shows J. H. ALLEN (left), President of the Florida Pulp & Paper Co., and the projected new Alabama Pulp & Paper Co., in the Park Avenue, New York, office of ROY K. FERGUSON (right), President of St. Regis Paper Co.
These two leaders of the industry had just jointly announced a transaction which will give St. Regis sufficient paper from these two mills to produce an additional 500 million multiwall bags per year.

SIGNIFICANCE OF ST. REGIS ACQUISITIONS IN FLORIDA

Chief significance of the recent agreement reached between the St. Regis Paper Co. and James H. Allen and his associates in Florida is that St. Regis now has a paper supply in all strategic areas of the U. S.—Northwest, Midwest, Pacific Coast and South—backing up its diversified production, but especially its far-flung bag plants which are being hard-pressed to meet demands of bag customers.

Acquisition of the capital stock of Florida Pulp & Paper Co. and of an interest in the new Alabama Pulp & Paper Co., which is under way across the road from the former plant at Cantonment, Fla., (see pages 22-23 May PULP & PAPER INDUSTRY), diversifies and balances St. Regis sources of supply.

Observers remark that this transaction is likely to put St. Regis well up into the top four or five companies of this industry. Its sales already have more than trebled since pre-war years.

Another important new development in its program is an increase in the amount of bleached pulp produced at its big kraft pulp mill in Tacoma, Wash., where only half of the 300 tons daily had previously been bleached.

The Florida Pulp & Paper Co. mill gives capacity for 200 tons a day of paper and board from bleached and unbleached pulp.

The new Alabama Pulp and Paper Co., being built on the same site 17 miles north of Pensacola, will begin making 250 tons a day of kraft paper in Dec. 1947. A new multiwall bag plant in the same location will be integrated with the new setup. The new mill and bag plant will cost $10,000,000.

Not until the Alabama Pulp & Paper Co. and the bag plant are completed will St. Regis rest easy, as far as meeting the tremendous demands for the wartime-proved heavy duty bags is concerned. But then they will be taking care of customers of its many bag plants in all the "agricultural bowls" and industrial areas where these bags are so urgently wanted.

Within the past year, St. Regis acquired Watab Paper Co., Sartell, Minn., and Nashua River Paper Co., East Pepperell, Mass., to increase supply of kraft paper for multi-wall bags in one case, while Nashua continues to make gummed tape and specialties.

Also St. Regis has made arrangements with Time-Life-Fortune to manage that magazine publishing companies' new properties — the Maine Seaboard Paper Co., Bucksport, Me., and Hennepin Paper Co., Little Falls, Minn.

A paper mill is contemplated in connection with the Tacoma pulp plant. At Deferiet, N. Y., St. Regis has embarked on $5,000,000 groundwood expansion for greater production. And St. Regis' pulp plastics plant at Trenton, N. J., is expanding.

This all adds up to a broadening and integration program which should solidify and assure the future position of St. Regis in bag, board, book paper and other products.

Good Wood Backing

The tie-in with James H. Allen and his Florida associates is significant because observers say Florida Pulp & Paper Co., with 195,000 acres of timberland, has had one of the most solid woodlands base in the South. It acquires timber from a total of 500,000 acres, Mr. Allen said. In New York last week, completing the deal with St. Regis, Mr. Allen, who continues as president of the Florida and Alabama companies, and on June 18th was elected a director of St. Regis, voiced the motto of his operations to PULP & PAPER INDUSTRY when he said:

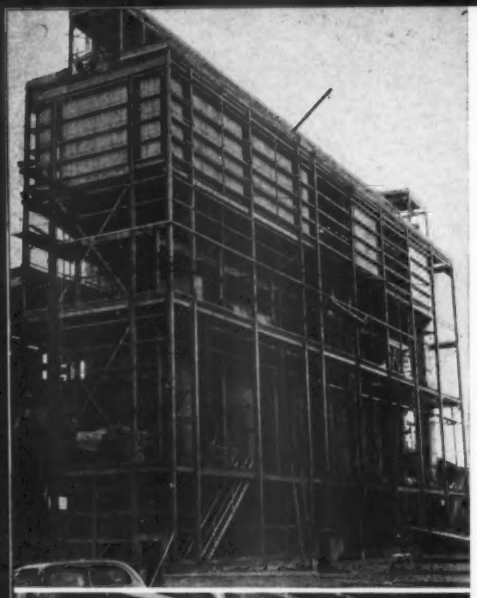
"When we cut a cord, we put a cord back into the woods."

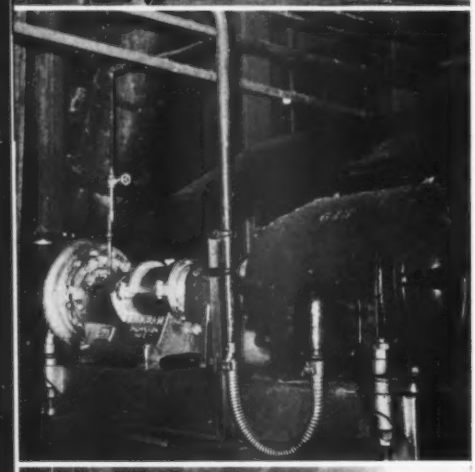
The position of the two southern companies as to wood was seconded by R. K. Ferguson, president of St. Regis. Mr. Ferguson has long been noted for his policy against overexpansion in the industry as a whole, not only from the viewpoint of markets but from the standpoint of supply as well. St. Regis's entry into the southern kraft industry via Florida and Alabama seems a clear indication of his company's satisfaction with the forestry outlook of the mills which Mr. Allen and his associates put into the deal.

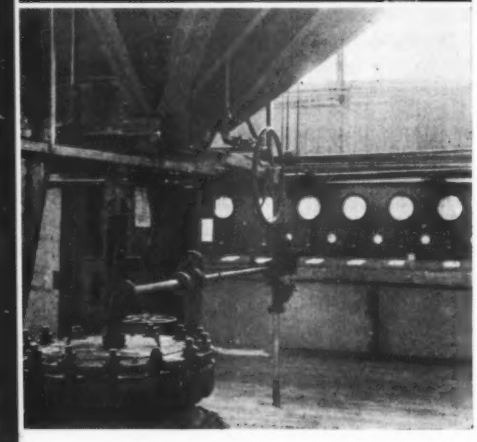
Under terms of the agreement, the entire capital stock of the Florida company was exchanged for St. Regis common stock.

St. Regis also will have an interest in the Alabama Pulp and Paper Co., The new mill and new bag plant will be integrated with the existing Florida Pulp & Paper Co. The kraft mill is especially designed and equipped for manufacture of heavy duty multiwall bag paper, and the entire output will be sold to St. Regis under a long term contract.

"All signs point to continued increased demand for multiwall paper bags," Mr. Ferguson added.







Top: Digesters, overhead chip bins and blow pits (left) before being housed in aluminum. Structure is 95 ft. high.

Middle: Much stainless steel is used in digester system, all fabricated by Esco, including castings of pump (foreground), heat exchangers, blow valves and piping (back). At right is 75 hp. splash proof U. S. electric motor.

Below: New Foxboro digester instruments panel (background). Digester mouth (foreground).

Aluminum Digester House Shines Over Oregon

Are you scratching your head over the construction materials shortage?

A unique type digester building, perhaps the only one of its sort in the world, has resulted from the materials crisis and the fire which destroyed the old wooden digester house at Oregon Pulp and Paper Co., Salem, Ore., last year.

The new building, designed by Nils Teren, vice president, consists of concrete foundations, steel superstructure and corrugated aluminum sheathing, with a hollow tile separating wall beyond the blow pits.

It has overall dimensions of 156 feet length, 33½ feet width, with heighth of 95 feet. A monitor for the chip elevator system 17 x 18 feet in its widest portion rises 12 or more feet above the overall height of the building. The remaining portion containing the blow pits extends the building for 29 feet more in width with two elevations, giving an overall height of 60 feet for 80 feet, and 53 feet for the remaining 76 feet of the structure. The new building houses the digesters, blow pits and overhead chip bins.

The battery of 12-ton digesters, two built by Willamette Iron and Steel Co., Portland, Ore., and four later supplied by Puget Sound Machinery Depot, suffered no damage beyond the blistering of protective exterior paint, and required no changes or alterations to fit into the new structure.

There is a great deal of stainless steel used in the digester system, all of it supplied by Electric Steel Foundry Co., of Portland. The digesters are all equipped with forced circulation and heat exchangers of 350 sq. ft., two by-pass type engineered by Esco. This indirect cooking method has reduced screening losses by approximately 50%. Each digester utilizes a 10 x 12 inch 2400 gal. per min. pump powered by a 75-hp. splash proof U. S. Electric motor. The pumps are in the main fabricated with Esco stainless steel castings and all blow valves and bottom blow fittings are of stainless steel supplied by Electric Steel Foundry Co., installed majorly in 1938 and uninjured by the fire except that gas coolers required reconditioning. New Foxboro digester control instruments have been installed.

OUR COVER PICTURE—

• shows the new shiny aluminum sheathed digester house at Oregon Pulp & Paper Co., Salem, Ore., which has become the "talk" of the Pacific Coast industry these days. Those who tour the continent to call on mills say it's the only building of its type they have seen or heard about.

Modernistic . . . striking . . . attractive . . . something different . . . and, besides, the mill operations men at Salem say they like it, even though the idea was born as an emergency measure in the current serious shortage in building materials. This building has concrete foundations and steel superstructure housed with the aluminum.

They're not worried about fires here, anymore. The cover picture shows old wooden digester house, destroyed by fire, which the new one replaced. The new building also houses blow pits to left of digester housing. Acid tower is shown further to left.

This mill is on a slough of the Willamette River in Oregon. The slough, shown in picture, is also a game preserve and healthy ducks flock there, confounding the "nature lovers" who might think the ducks wouldn't like the sulfite mill effluent.

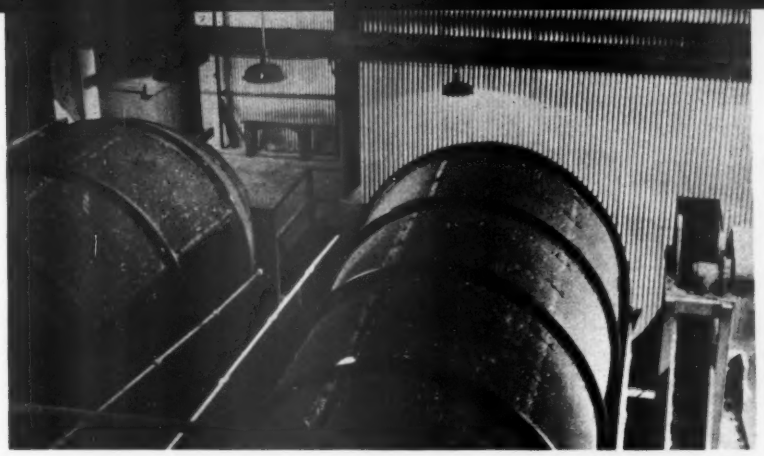
Because construction took place in the immediate after-the-war period, some difficulties were experienced in securing structural steel, and later in procuring the lumber necessary to complete the wood-handling plant. However, full operation started again early this year, under pressure exerted to get back into production by Karl W. Heinlein, resident manager, and D. B. Armstrong, superintendent.

Wood Handling

The fire, in addition, destroyed all wood buildings and machinery connecting the present sawmill with the digester building, necessitating complete reconstruction. The wood handling arrangement has been engineered in the following manner:

Cants come on a Rex (Chain Belt Co.) flat transfer chain to be taken off by three sets of air operated jump rolls to three Stetson-Ross cant barkers, each operated by 50-hp. motors. Jump rolls and conveyor housing were fabricated by the mill crew on the job, with air supplied continuously at 100 lbs. pressure by an Ingersoll-Rand compressor powered by a 125-hp. motor. A 100-ft. clear wood conveyor belt 24 inches wide, by U. S. Rubber, car-

NILS TEREN, Vice President and Manager, Oregon Pup & Paper Co., and also of the affiliated Columbia River Paper Mills. New unusual digester and blowpit structure was his design. F. W. Leadbetter is President of the Companies.



Corrugated aluminum sheathing used at Salem mill shows on walls in background over these Carthage rotary chip screens. Bucket storage to digester chip storage at top of 95-ft. high new building is shown in left background. New screens were put in this screening equipment after the fire.

ries the clear cants to the conveyor chute, into which all wood ultimately falls. After debarking, the cants pass a bark inspector who takes off any remaining adhering particles with a spud as the logs go by on live rolls. The rolls operate from a General Electric 10-hp. motor. All wood then drops into a Rex box-link chain conveyor chute, 150 ft. in length, and travels across a spiked roll to a 36-in. Goodyear rubber belt conveyor 200 ft. in length which was made originally for the Shasta Dam, and is inclined, to enter the chipper and screening building on the second floor level. This rubber belt conveyor is powered by a G.E. 10-hp. motor with Pacific motorized speed reducer. Cants here pass another spiked roll to five strands of Rex transfer chain and come down a short decline to four strands of Rex flat chain which lead to the chipper.

As they travel on this conveyor they pass under a hooded shower, consisting of four pieces of 2-inch pipe extending the full width of the conveyor. Cants drop either to a Sumner 84-inch chipper, powered by a 250-hp. G.E. motor, with Gates 12 V-belt drive, or to a Carthage 84-inch, powered by a 250-hp. G.E. motor, with 10 Gates V-belt drive. These chippers and motors were reclaimed after the fire.

Beyond the chippers, wood stock is elevated by two sets of 24-inch bucket conveyors to discharge into a chip conveyor which feeds three Carthage rotary chip screens, which now have new screens replacing damaged parts. All unacceptable chips are screened out into a conveyor which feeds a Western Machinery Corp. re-chipper which carries 16—5½ x 5½-inch knives. This again discharges into the chip conveyor for rescreening. All acceptable chips pass to two 20-inch bucket conveyors which elevate approximately 110 feet to discharge to chip bins for digester feeding.

KARL W. HEINLEIN, Resident Manager of Oregon Pulp & Paper Co., Salem: "We are happy to be back at work with such a fine looking plant."

EXECUTIVES AT SALEM (left to right): DOUGLAS B. ARMSTRONG, Supt.: "We are certainly proud of the building."
E. A. WEBER, Sulfite Supt.: "We probably have more stainless steel in connection with digester system than any other west coast mill except one."

Have Hydraulic Barker

The building, to which the long rubber belt conveyor discharges its cants, is of wood construction 90 x 165 ft. on the ground with 27⅓-ft. overhead, employing bow string arch construction designed and built by Timber Structures, Inc., Portland.

The company contemplates installation of an hydraulic log barker, type not yet determined, at some future date.

Installation of machinery fell under supervision of O. P. Wegner, plant engineer. G. R. Richards, chief electrician, supervised all electrical construction and installation.

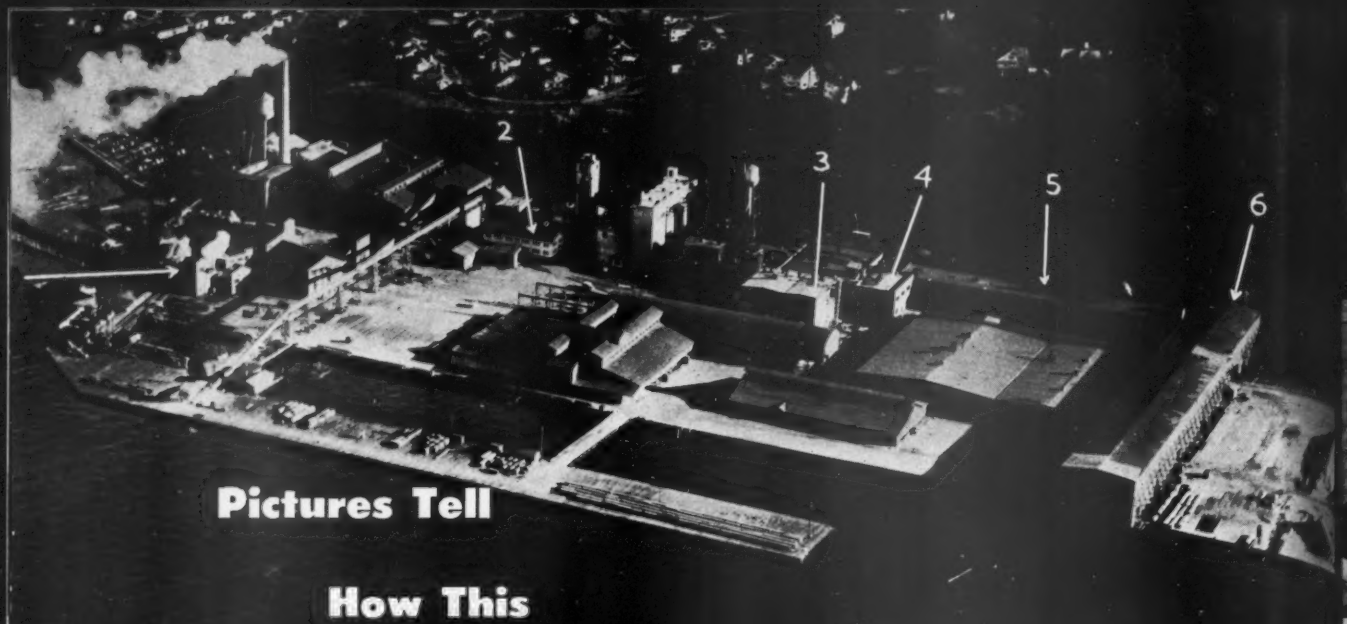
E. A. Weber, who left Central Paper Co., Muskegon, Michigan, 17 years ago to become sulfite superintendent at Oregon Pulp and Paper Co., is highly pleased with the new plant in all details, and said, concerning the digester building and equipment: "We probably have more stainless steel, engineered in connection with our digester system, than any other mill in the West, with a single exception."

Sommers of C. & O. Mill Enters Converting Field

F. R. Sommers, manager for several years of the Los Angeles plant of California-Oregon Paper Mills, resigned in June to go to Denver to enter into the paper converting business. His successor had not been named at the end of the month.

Plastics in Paper Union

The AFL pulp, sulfite and papermakers union has enrolled employes of a plastics plant, the Fibrinite Co., of Aberdeen, Wash., into a local.



Pictures Tell How This Mill Improves Its Market Pulp

Here is a story in pictures of how the Everett, Wash., mill of the Pulp Divisions, Weyerhaeuser Timber Co. (shown above in most recent aerial photograph), has achieved improvement of its market pulp product.

Begun as an emergency wartime measure, the improvements include a third stage and modernization of bleach plant, an addition to screen room and an increase in water filtering capacity.

Points of interest in the above air view of the mill as shown above are: (1) the 3-year-old whole log hydraulic barking and chipping plant (described in our 1943 Review Number); (2) the two-story office (directly in front of which is small building housing the more recently added hydraulic slab barking plant; (3) addition to bleach plant, line across roof marking division between old and new parts; (4) addition to screen room; (5) machine room, and (6) lumber shed. Square-roofed building bound on two sides by the latter two buildings is the pulp warehouse. Between office and machine room, the three high structures are (left to right): acid tower, digester house and mill water high tank.

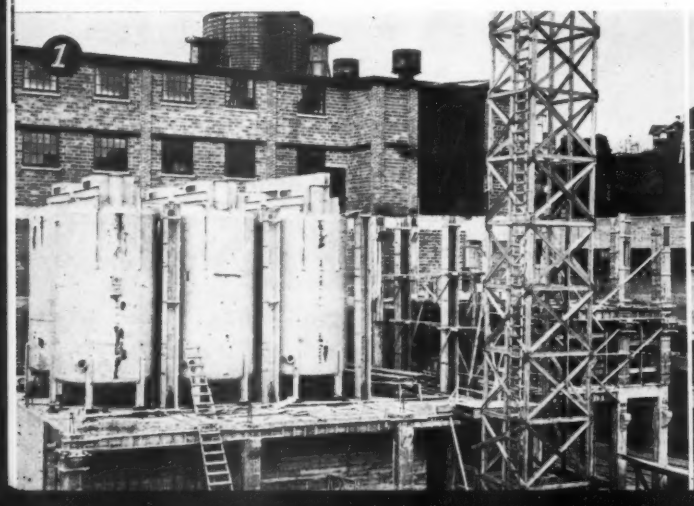
Following is a description of pictures below and on next two pages. Quite a number of equipment companies were participants in the program which followed plans and specifications especially outlined by the Pulp Division of Weyerhaeuser Timber Co.

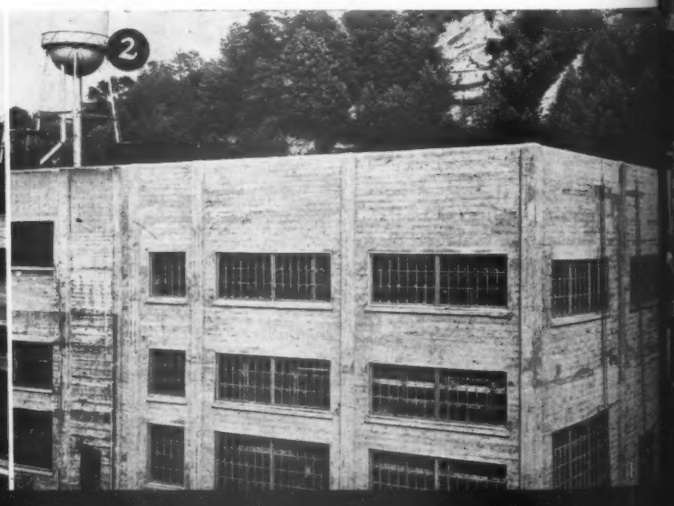
1. Steel caustic cooker shells have been set in place above the dump chest, while construction proceeds around them. Six cookers and chest were lined by Stebbins Engineering Corp. Old two-stage bleach plant is in background. A second high density stage was added to existing chlorination and high density stages.

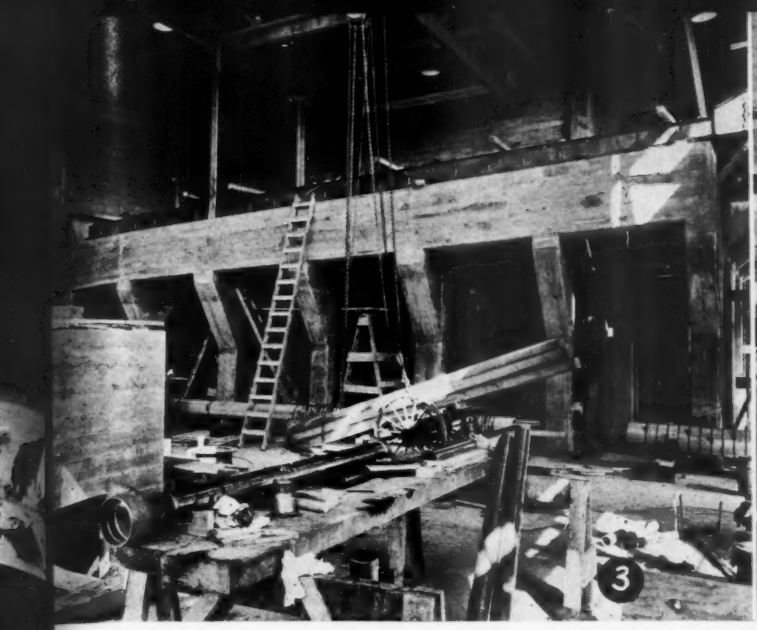
High scaffolding at right is a construction hoisting tower.

2. The screen room addition. This concrete structure houses three lines of new Improved Paper Machinery Co. knotter screens and bleach deckers. Bleached screen capacity was installed in old screen room. New arrangement permits original screen room crew to operate both bleached and unbleached screening facilities.

This entire program costing something over a half million dollars was undertaken in April of 1945 at the specific direction of the U. S. Army ordnance under plans that would have converted the Everett mill's







pulp to nitrocellulose for firing large and medium caliber artillery.

If the U. S. Army could have had its way, the Everett improvements would have been completed by last summer, in time to contribute to the defeat of Japan, but there's a saying about the plans of "men and mice" and it even applies sometimes to plans of men at war. Other war emergencies apparently interfered with deliveries of equipment and the construction time table at Everett.

When first operation of the new additions to the mill began on Dec. 3, 1945, they, of course, were utilized—not for manufacture of nitrating pulp—but for paper grades of pulp.

3. Interior of screen room addition. Here are shown, in background, concrete piers for knotter screens and stock flumes. A line of screens is already in place on platform above the piers.

4. Here's the finished job on the upper deck or platform shown in Photo No. 3. Here the three lines of Impco knotter screens are in place and operating.

5. Here is former 2-stage bleach plant, or chemi-cleaning plant as it was officially named, which went into operation in May 1941. Knot borers were then immediately eliminated.

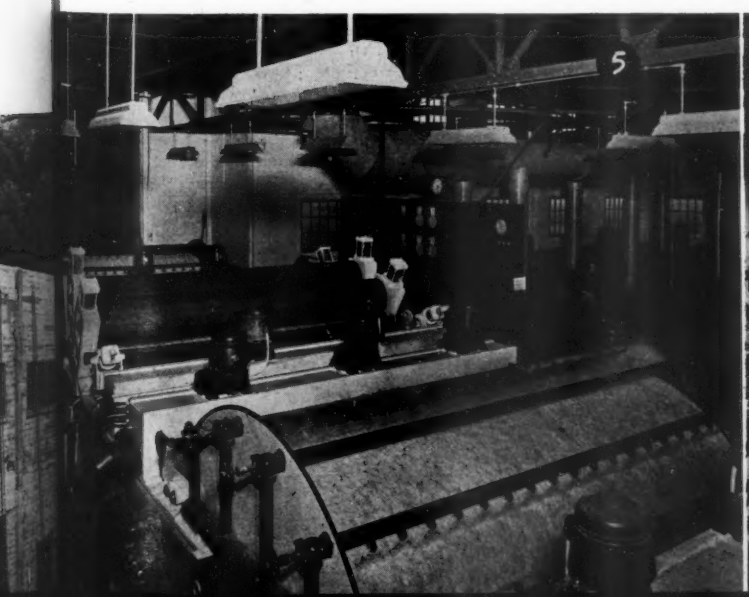
It previously had been necessary to break logs down into small cants in order to make visible knot and bark dirt and much handling, equipment and power had been required for that purpose.

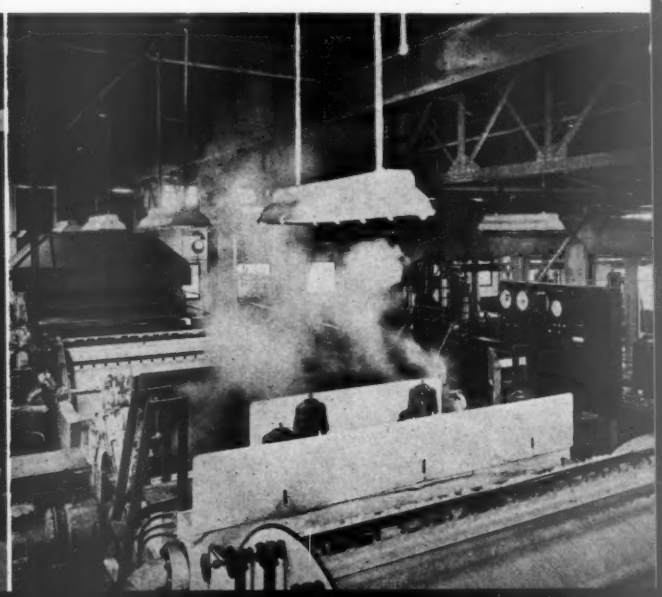
The lineup from front to back in Photo No. 5 shows (1) chlorine washer (2) acid-proof Pulp Bleaching Co. thickener and (3) final washer. Between the cylinders are shown Western Gear Works' vertical mixers on interstage positions. In rear of room, at right, are high density chlorine bleaching cells, with Western Gear reduction drives.

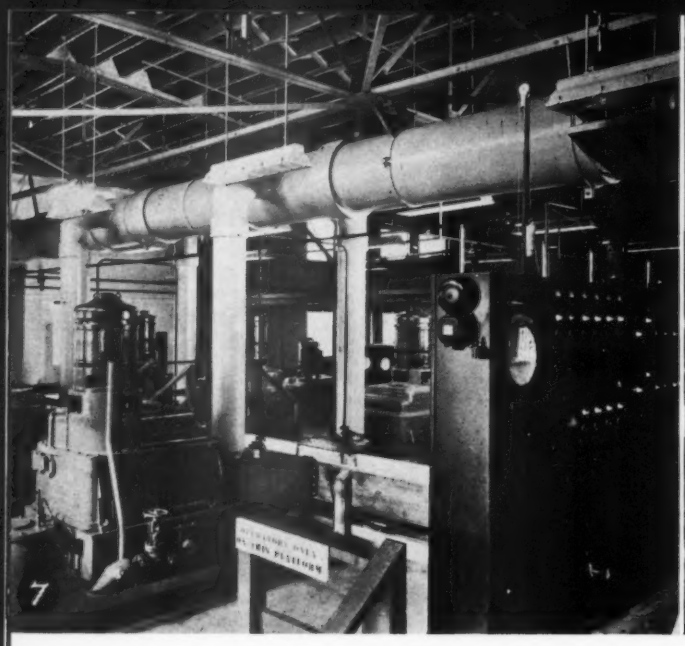
6. Here is view from same position in bleach plant as No. 5, but taken after modernization and addition of 3rd stage. The caustic washer remains in foreground, but a new Oliver United "Ringvalve-design" 8 x 12 ft. high density thickener is shown in the second position. The tile vat was made by Stebbins. Steam is shown coming from it, as it is in operation handling the caustic treated stock.

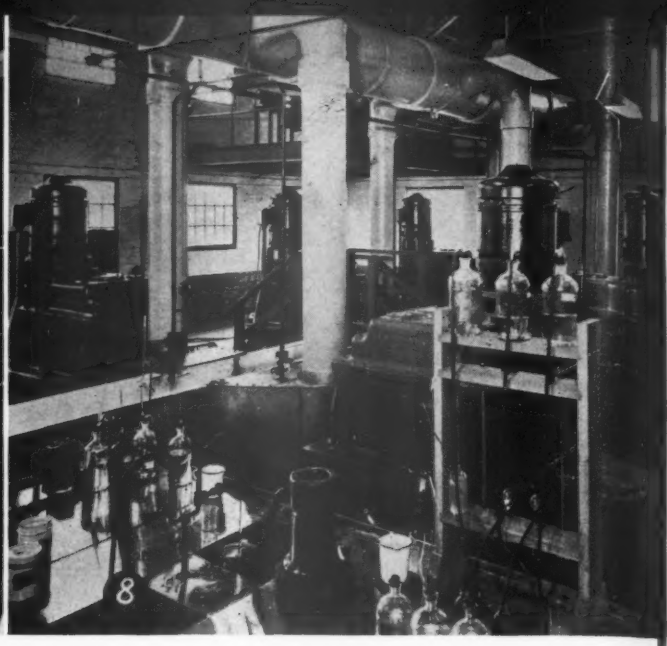
At this position it replaced the Pulp Bleaching Co. chlorinated stock washer thickener which has been moved to the final position in the left background, and is now under a hood. The old final washer remains in between the new high density thickener and the old chlorinated stock thickener.

Here again as in No. 5, Western Gear reducers are in evidence and the Westinghouse control panel which was standing alongside the









first installations since 1941 is still partially retained in about the center of this picture.

7. Closer view of the caustic stage agitators at another end of the operating floor of the bleach plant. They are topped by Western Gear drives and G.E. motors are used.

At the right is a closer view of the Westinghouse control panel and behind it may be seen part of the stock belt. Ventilating equipment is overhead.

8. All six of the caustic cooker agitators from another angle, looking across the testing station table with the chemist's testing equipment in view. Here is another view of the stock belt coming into the picture from left side. This stock belt is in a Stebbins tile-lined concrete trough which is an improvement over the old type lead-lined wood trough. This new type of belt trough is the only one of its kind in operation today in the industry.

James Brinkley supplied cooker agitators, Western Gear equipment and Warren pumps for this bleach plant.

9. View of the bleach stock deckers, showing arrangements of white water pumps and stock pump. The three dissimilar types of drives and pumping equipment are seen in line between the Lamb-Grays Harbor manufactured-deckers.

At left and farthest from the camera is a 300-hp. Westinghouse drive serving a 10,000 gpm Bingham double volute white water pump underneath it. Next in line is seen a General Electric 75-hp. motor over Bingham axial flow vertical stock pump. And the third one, nearest the camera and on right in the picture, is a Westinghouse 75-hp. motor over another white water pump.

10. Addition to the filter plant. Northwest Filter Co. provided equipment used in two additional sand filters which increased water filtering capacity by 6,000,000 gallons per day to about 26,000,000 gallons. This gives the mill a total of eight filters.

The control room is shown at top of this new addition. In back is the old wash water tank.

Otto C. Schoenwerk, of Chicago, as in many past Weyerhaeuser developments, was the consulting engineer.

It is interesting to note that in the planning and most of the preliminary work he was assisted by Gerald F. Alcorn, then plant engineer at Everett, but the last stages of the project were completed under Mr. Alcorn's direction in the first few weeks after he became mill manager, succeeding Russell Le Roux.

Palmer Supply Co. of Seattle, Alaskan Copper Works and Grinnell Co. were among other suppliers

There Is Plenty of Starch—But Not for Paper Industry

A series of meetings in Washington, D. C., on the starch problem have done little except to bring forth the news that there is plenty of starch—but not necessarily for the paper industry.

The problem is one of distribution to various industries, and of attractive prices elsewhere.

Experts say that July and August look bad, but the upcoming crop is good. If the price is not prohibitive now, however, it may be soon, and substitutes and extenders are the order of the day.

Locust gum, araby, maneoc, and other substitutes are helping.

Those who are close to the starch picture believe that the paper industry will skim through to the new crop, it is hoped, toward fuller distribution to paper manufacturers.

Tinker Gives Facts

E. W. Tinker, executive secretary of the American Paper and Pulp Assn., presented a statement to the U. S. Senate small business committee on the effect of the starch shortage on the paper industry and, partly as a result of his efforts, the Office of Economic Stabilization directed release of 6,000,000 bushels of corn to keep wet-process millers operating at a "reasonable rate" up to Aug. 1.

Uncertainty of OPA's future in early July was making the corn products' future equally uncertain.

CPA Statement

A Civilian Production Administration statement made to the American Paper and Pulp Association on June 19 follows:

"The situation at the present time is that the Department of Agriculture is finding out the inventories and future deliveries of corn the wet-millers will have between now and the first of August. The Department of Agriculture will supplement those inventories with corn so that each wet-miller will be able to run at approximately 80% of his capacity. We expect that this will produce enough cornstarch to meet the bare requirements of industrial users. CPA will work out with the Department of Agriculture the essential industrial users and request the wet-milling industry to ship starch to those industrial users. If inventories are kept at a bare minimum there will be enough cornstarch so that all industries can be kept going at a reasonable rate.

"After the first of July, CPA and the Department of Agriculture will work out the problem of supplying the wet-millers with corn for August, September and October. At that time a new crop should be harvested."

The paper industry has in previous official statements been described as an essential industrial user of cornstarch.

Any company which has undue difficulty in obtaining starch and whose inventory is dangerously low, should communicate with CPA, attention Mr. William Easton, according to an advisory message from E. W. Tinker, executive secretary of APPA.

Midwest Stream Regulatory Officials Learn How Much Mills Do to Solve Problems

Representatives of official regulatory agencies in seven Middle West states were cordially welcomed at a meeting on June 5 in the Drake Hotel, Chicago, where they heard—with no little surprise—about the numerous and costly research activities being financed by pulp and paper industries of the U. S. in an effort to find economic methods of solving stream problems.

This was another of a series of similar meetings held over the country to acquaint these various state or city pollution commission, sanitary district or health department officials of the efforts which mills are making, which were described in PULP & PAPER INDUSTRY'S 1946 North American Review Number (map and article on pages 38-40).

At the Chicago meeting the Lake States and Central States Regional Committees of the National Council for Stream Improvement were joint sponsors, with Russell L. Winget, executive secretary, and Dr. Harry Gehm, technical advisor, of the Council participating. Also present to discuss various projects were Dr. Willis Van Horn, of the Institute at Appleton; Prof. W. W. Hodge and Phillip Morgan of Mellon Institute, and Prof. Don Bloodgood of Purdue.

MAJ. J. H. FRIEND (left), Vice Pres. and Gen. Mgr., Southern Kraft Div., International Paper Co., who is Chairman of Southern Regional Committee for National Council for Stream Improvement.

JOHN TRAQUAIR (right), Chemist, The Mead Corp., Chillicothe, Ohio, who presided at June 5 joint meeting in Chicago of Lake and Central States Regional Committees.

It was interesting to observe that of the various groups represented, Wisconsin and Minnesota persist in the too-sweeping inaccuracy of calling its control bodies "water pollution" commission or committee, an error frequently pointed out in this magazine. Michigan, possibly correctly aware that some wastes do not pollute, calls its body the Michigan Stream Control Commission.

U. of Washington Project Has Wide Scope

Jack Taylor, Washington state pollution commission director, recently made an official announcement concerning activities of the University of Washington pulp mills' research project which indicates the wide range of work being done there.

According to Mr. Taylor, this research body has experimentally produced or isolated yeast, butane alcohol, sugar, lignin, ammonia and carbon from sulfite mill waste liquor.

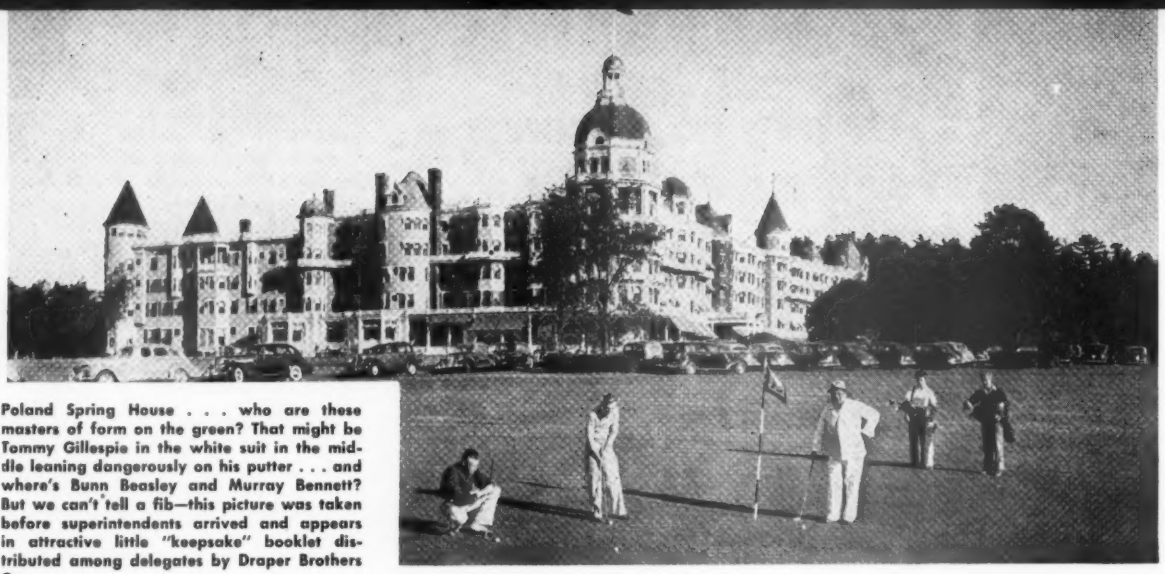
He stressed the point, however, that commercial possibilities of such products are still doubtful.

But new glues and plastics produced from the lignin, Mr. Taylor said, may eventually prove helpful to the plywood industry.

Twenty pulp mills of Washington State are contributing a minimum of $60,000 a year to the project.

Fire at Antioch

Fire swept over five acres of paper stock and straw stacks at the Antioch, Calif., plant of Fibreboard Products, Inc., on July 26, causing estimated loss of $350,000.



Poland Spring House . . . who are these masters of form on the green? That might be Tommy Gillespie in the white suit in the middle leaning dangerously on his putter . . . and where's Bunn Beasley and Murray Bennett? But we can't tell a fib—this picture was taken before superintendents arrived and appears in attractive little "keepsake" booklet distributed among delegates by Draper Brothers Co.

POLAND SPRING CONVENTION --

Summary of Forums—Review of Important Papers Future Plans of Superintendents Take Shape

The Pacific Coast is back in the running for the presidency of the American Pulp and Paper Superintendents Association as the result of elections at its 26th yearly gathering in Poland Spring, Maine, last month.

And the lineup for future conventions is shaping up this way: Chicago, Cincinnati or Detroit in 1947; New Orleans for sure in 1948, and probably Vancouver, B. C., with Seattle, as alternate in 1949 (100th Anniversary of the Gold Rush to the Coast). The two Southern divisions have things pretty well sewed up for 1948 and unless something unforeseen happens, the historic and romantic "Paris of America" is the dead sure choice for that year. For '47, Cincinnati and Chicago have most supporters; Chicago has the edge as to facilities.

The Pacific Coast had been without a representative on the roster of officers of the superintendents association for more than a year since Niles M. Anderson went over the International line to manage the new Marathon mill in Canada. If he had remained in his native bailiwick on Puget Sound, the normal course of advancement of vice presidents would have found him in the president's chair at the recent Poland Spring meeting. But since he no longer represented the Far West and for other pressing reasons, Mr. Anderson resigned just as he was on the last threshold of high honor.

So, with just one new name to add to the list of vice presidents at this convention, the superintendents restored the Farwest to their "Big Six." The new face in their "official family" is Charles E. Ackley, a native of Antrim County, Michigan, but a westerner by adoption and currently superintendent in the Crown Zellerbach organization on special assignment by that company. He was elected fifth vice president.

As we announced last month, Homer H. Latimer, mill manager, Champion Paper & Fibre Co., Hamilton, O., moved up to the presidency, succeeding Raymond L. Barton, superintendent, Michigan Paper Co. of Plainwell, who held the gavel for two years, serving his own term and the one that might have been Mr. Anderson's.

Other officers moved up in orderly rotation. Raymond F. Bennett, Ecusta Paper Corp., Pisgah Forest, N. C., became first vice president and thus, if rotation is followed, a Southerner will be in the chair in 1948 at the first real Southern convention (barring only one previous one in Washington, D. C.) and that one is now practically dead sure to be in romantic New Orleans.

Second vice president is now Ollie W. Messner, Robertson Paper Box Co., Montville, Conn.; third vice president, Charles H. Reese, Nekoosa-Edwards Paper Co., fourth vice president, James Fish, Paterson Parchment Paper Co., Bristol, Pa., and George Craigie was re-elected secretary-treasurer.

Ralph Kumler, American Cyanamid & Chemical Corp., was elected new chairman of affiliates.

Convention Sites a Problem

Where to hold conventions is becoming a real problem in the industry, and as indicated in our June issue the talk everywhere is that probably all seasonal meetings will have to be split. Paper conventions are getting bigger and bigger—this one approached the 900 mark—and fewer and fewer hotels are either able or willing to handle the crowds.

The Poland Spring layout is one of the few that are both willing and able, and the spot added further to its popularity with the superintendents who came from Portland, Oregon, to Portland, Maine, and from the Great Lakes to the Gulf of Mexico. Maine is an appropriate state in which to hold a

ATTENTION: MANAGEMENT

One paper at Poland Spring was especially addressed to management . . .

In the North American Review Number of PULP & PAPER INDUSTRY this year, a Southern mill manager was quoted as saying that getting the foreman on "management's side of the table" is the biggest problem of the industry today.

There's more about that subject in convention report and on page 44 (paper by Ed Jackman).

superintendents' annual—it's second in woodpulp, third in paper, and back in 1913 the University of Maine established the first four-year course in pulp and paper manufacture. Today Maine has 24 paper mills and 30 pulp mills, turning out book, newsprint, wrapping, groundwood pulp as well as sulfite, sulfate and soda.

The Poland Spring delegates were too busy to take note of the fact that they met on the 212 anniversary of the establishment of the first mill in Maine, or to salute the memory of its first superintendent—Dick Fry, imported from England by the owners, Tom Westbrook and Sam Waldo.

The program was a full one, and the golf courses of Poland Spring House and Summit House were inviting under the soft sun of a New England summer. If Dick Fry was around in his knee-breeches and buckle shoes, nobody saw him—or at least nobody would admit that they did.

Will Call on "Old Men"

Maine's first paper mill superintendent would have been astonished at the increase of his tribe, and at the power and seriousness of the association gathered for business with pleasure on the side. Said the new president, Homer Latimer, in the business meeting of the group: "I consider this office a great responsibility and will do my best to fill it. I am going to be asking for the help of the old men."

The "old men" in the association are the ones who have moved up through the five vice presidencies to the president's chair. They are not necessarily old in years, but—as the newest "old man," Ray Barton, put it—they are likely to feel that way when they lay that gavel down.

Mr. Barton introduced the new vice president. "I am pleased at the choice of Charley Ackley," he said. "I have just returned from a great meeting out on the Pacific Coast and I give our new vice president a lot of credit for that meeting."

In acknowledging the introduction and his election, the Pacific Northwesterner said that he looked forward to one day bringing the convention to the West Coast, and that he wished to have the membership think of him as anxious to be helpful in that area. "I hope you will call on me—by mail or in person—when I can be of assistance in my region," Ackley said.

The new addition to this "official family"—Mr. Ackley—came to Poland Spring still wearing the laurels achieved as chief spark plug of the record-smashing Pacific Coast Superintendents-TAPPI joint meeting at Gearhart, Ore. Although born in Michigan, his first mill job was at Camas, Wash., where he worked up to machine tender in seven years. Then came a 7-year period at Consolidated's mill at Stevens Point, Wis., and with KVP at Parchment, Mich., but he returned west to stay in 1926, working in Willamette Valley and Grays Harbor mills. He's four times a grandpappy.

PRESENT—PAST—AND PROBABLE FUTURE PRESIDENTS of the Superintendents Association.

Top row (left to right): Newly elected President HOMER H. LATHIMER, Mill Manager at Champion's Hamilton, O., mill; RAYMOND L. BARTON, his predecessor as top man in the association and Supt., Michigan Paper Co., of Plainwell, and OLLIE W. MESSNER, Robertson Paper Box Co., Montville, Conn., who, as Second Vice Pres., is in line for Presidency in 1948.

Second row (at left): First Vice Pres. RAYMOND F. BENNETT, Supt., Ecusta Paper Corp., Pisgah Forest, N. C., who as next Prexy will prepare for '48 meeting in New Orleans. With Mr. Bennett (l. to r.) are GLEN SUTTON, Sutherland Paper Co., who presided over machines and coating session, and STANFORD G. BLANKINSHIP, a recent Past President of Supts., now with Perkins-Goodwin Co.

Below are Third Vice President CHARLES H. REESE (left), Mill Mgr., Nekoosa-Edwards Paper Co., and Fifth Vice President CHARLES E. ACKLEY, who has been on special assignment by Crown Zellerbach Corp., since leaving Superintendency at Lebanon, Ore.

The Fourth Vice President, not in picture, is Jim Fish of Paterson Parchment Paper Co.

Employe-Management Relations

There were two important papers given at different sessions on the important problems of employe relations—one dealing with management's relations to the foremen or supervisors and the other the supervisor's relations to employes in his charge.

The first one—"The Man in the Middle" by Edward A. Jackman, assistant personnel manager for Oxford Paper Co., Rumford, Maine, was a truly brilliant treatise on the problem: What is management going to do about the foreman.

It created such a stir at Poland Springs, and stimulated so much lively discussion of the place of the foreman in relation to the unions, on one side, and management, on the other, that we are publishing this paper in full in this issue of PULP & PAPER INDUSTRY (see Page 44).

Mr. Jackman's paper landed in the coated papers session on the final day, simply because of his company's paper product but it deserved a much more prominent place on the program, in the opinion of some who heard it.

Human relations rather than "labor relations" were stressed by G. R. Schenck, director of industrial relations for the Riegel Paper Co., New York, in his "Reflections on the Responsibilities of Supervisors in the Field of Labor Relations," given to the kraft group on the second day.

The attention of the membership to labor relations at the 1946 conclave gave ample evidence that the modern mill superintendent no longer considers that the field is limited strictly to technical production and maintenance. Mr. Schenck laid down eight points for consideration: employment and placement—in which he said rested many complaints in the final analysis: training working conditions: safety and reasonable hours; adequate remuneration; promotion on ability; employee welfare programs; and collective bargaining.

Printing and Pulp

After an opening business meeting June 17, the convention got under way at a general conference in the Ball Room of Poland Spring House with Mr. Latimer presiding. The question up was "Problems of

AT THE SUPERINTENDENTS CONVENTION. Top row, left to right: H. E. Karberg, Alliance Paper Mills, Ltd., Merritton, Canada, chairman of the chemical pulp session; Gene Bechard, Atalnta, Ga., representative of Appleton Machine Co. and other firms; Dr. T. W. Toovey, Penn Salt Mfg. Co. (formerly with B. C. Pulp & Paper Co.), and Dr. J. S. Reichert, E. I. du Pont de Nemours & Co., both panel members in the chemical pulp forum, and Mr. and Mrs. J. M. Youngchild, International Paper Co. Lower row, left to right: Joe Scheuermann of Cameron Machine Co.; Robert Vokes, Dilts Machine Works; Douglas G. Sutherland, Sutherland Refiner Corp., and C. W. Morden, President, Morden Machines Co. (the three participants in the pulp preparation round table in the fine paper group); Robert M. Wishart, Oxford Paer Co., and John D. Dickson, R. T. Vanderbilt Co., co-chairmen of the fine papers session; and R. F. Driscoll, Manager, Smith Paper, Inc., Lee, Mass.

the Printer and How the Paper Industry can Cooperate" and the speaker was G. H. Petersen, director of the Printing Testing Laboratory, S. D. Warren Co., Cumberland Mills, Me. Mr. Petersen stressed the fact that the printing industry is a highly competitive one, that it will become more so, and that the welfare of a considerable part of the paper industry rests on cooperation with printers' problems. What the printer wants most, said he, is uniformity.

The speaker at the first day's luncheon, presided over by Ray Barton, was James Ritchie, assistant director of the U. S. Pulp Producers' Association, New York. His "National and International Aspects of the Pulp Situation" was featured on pages 28-30 of the June PULP & PAPER INDUSTRY. He predicted Scandinavian imports of up to 900,000 tons in 1946 and said recent OPA price increases made it likely that U. S. requirements would be met.

Unquestionably one of the most popular sessions of the convention was that on chemical pulp, chairmanned by H. E. Karberg, Alliance Paper Mills, Ltd., Ontario, Canada, and Murray Bennett, Stebbins Engineering Co., Watertown, N. Y. This was a lively forum on pulp bleaching (sulfite, sulfate and groundwood) with V. Woodside, Mathiesen Alkali, moderating. A notable panel of experts was available to the superintendents in this discussion, including Dr. J. S. Reichert, E. I. duPont de Nemours & Co.; Dr. J. D. Rue, Hooker Electrochemical Co.; Dr. T. W. Toovey, Penn Salt Manuf. Co.; R. C. Shearer, Alliance Paper Mills, Ltd.; John Schuber, Solvay Process Co., and others.

The three stages of bleaching of groundwood by the peroxide system were described by Dr. Reichert.

In the discussion it developed that poplar, spruce, balsam, and birch, appear to give the best brightness in return for the chemical dollar spent. It was brought out that while the higher the density the greater the bleaching satisfaction, it was also true that there was a leveling off in higher consistencies—a rather rapid leveling, so that the point of diminishing returns is reached. It was agreed that there was no indication that quality is affected by the higher densities. Starting brightness, the forum decided, is an important factor in bleaching and so is consistency.

This discussion of sodium chloride bleaching stressed the fact that the process offers no degradation of cellulose material. The possibilities in activating chloride with chlorine, in mills which are equipped to do so, was also discussed. It was said that the cost per ton of chlorine bleaching runs from one to two dollars higher than chloride.

Considerable interest in sodium peracetate bleaching of southern and northern kraft was shown, but the experts stated that not enough was yet known for a full discussion. But it developed that peracetate should bring lower costs, for a number of reasons, and possibly some brightness improvements. As for brightness, it was concluded that unless a degree of brightness is wanted *for actual use*, the additional expense is not justified.

At one point of the discussion the question was asked as to how to make a sample to get perfect pH control, and one of the panel members described the use of a tantalum sleeve in the moving stock.

So little reference to sulfite was made in the forum discussion that one superintendent asked humorously, "Aren't they going to make sulfite any more?"

Engineers' Session

A power and plant engineers' session was chairmanned by Roland

New Affiliates

During the Poland Spring convention of superintendents, ten new affiliate members were welcomed at a dinner on the night of June 16, at which the "movie man"—W. L. Glass of F. C. Huyck & Sons—showed more of his moving pictures. The new affiliates are: Ralph Kumler, American Cyanamid & Chemical Corp.; Morris D. Van Patten, Wm. E. Hooper & Sons; Olney Steffins, Penick & Ford, Ltd.; Ivar Ekholm, National Aniline Div., Allied Chemical & Dye Corp.; G. A. Peterson, Rice Barton Corp.; Foster P. Doane, Jr., Sandy Hill Iron & Brass Works; Charles Muzzy, E. D. Jones & Sons; A. L. Hamm, Combustion Engineering Co.; J. G. Bucuss, Acme Steel Co.; and H. O. Ehrisman, Foxboro Co.

A. Packard, Smith Paper Co., Lee, Mass., and A. M. Cooper, Westinghouse Electric Corp., and in another room of Poland Spring House the board men were gathered under the chairmanship of Ollie Messner, and T. H. Latimer of the Black-Clawson Co. Outstanding papers here were "New Thoughts on Drivers, Screens and Vats for the Cylinder Board Machine" by Allan Lowe, Sandy Hill Iron & Brass Works, Hudson Falls, New York; and "Benefits of the Board Machine Air System," by William K. Metcalf, J. O. Ross Engineering Corp., New York.

Stock Preparation

Very complete attention was given to a triple discussion on Tuesday in the fine papers session under the title of "Modern Methods of Stock Preparation." Said Robert M. Wishart, Oxford Paper Co., Rumford, Maine, "We have brought here three of the leading lights in the United States on the subject of stock preparation. He then introduced, in this order, D. G. Sutherland, Sutherland Refiner Corp., Trenton, N. J.; R. F. Vokes, Dilts Machine Works, Fulton, N. Y., and C. W. Morden, Morden Machine Co., Portland, Ore.

The three spoke in turn on their respective equipment and the methods brought into operation by them. The vigorous claims for each resolved into a general question: Whether the principles of stock preparation differ in the continuous process and the batch system of stock preparation.

Mr. Sutherland stressed continuous beating and refining for all papermaking fiber by means of highly machined equipment largely lined with stainless steel to maintain stock characteristics. He pointed out the importance of disc design, and how, in the 42-inch Sutherland refiner disc, the discharge is controlled at the periphery due to a check arrangement.

Mr. Vokes of Dilts insisted that the principles of stock preparation are not altered whether the process is batch-wise or continuous. He maintained that there should be separate systems for various stock preparation purposes which he classified as slushing, hydrating and cutting.

Mr. Morden championed the continuous method and stressed multi-unit hook-ups. The continuous flow treatment, Morden said, introduces production line efficiency into pulp refining. But he saw no reason to hold fast to the notion of using "one machine for everything" and pointed out successful installations of the "Stock-Maker."

Representatives of all three of these well known types of pulp preparation equipment were able to make most all of these claims for their machines. Very big savings in power and floor space, reduced labor and simplified operation, an ability to change treatment of stock almost instantly and high retention of coatings in connection with jordans.

In the discussion which followed the papers it developed that the three exponents of their various methods were in agreement on several important points. One of the most moot questions, for example, was whether there should be changes in the width of bars on stock preparation machines. Both Mr. Morden and Mr. Vokes thought not. It seemed to be the concensus that a machine should not be bent to every purpose, but rather that it should be decided whether a machine or a series would do the job required—and then to let the equipment do it.

That stock preparation had come a long way, whether the mill uses a continuous process or not, was agreed by the discussion — but Charles Reese summed it up, seemingly, when he said, "There is considerable I don't know about stock preparation, and I think a lot of us are in the same boat. I'm glad we brought this thing up for study, that we had these men here. And I think

Scenes at Poland Spring:
1. Mrs. R. C. Sahlin, a winner of ladies' putting, at left. At right, Allan Hyer, Vice Pres. in charge of sales, Black-Clawson Co., who helped manage the ladies' contest.
2. Left to right: Anne Jones, Edward H. Hall of Morey Paper Mill Supply, Mrs. Hall, Mrs. Bancroft Hall, Bancroft Hall of Fitchburg Screen Plate Co., and Mrs. Nat Wardwell of Carthage, N. Y.
3. Bowling on the green.
4. Softball baseball.
5. Left to right: Carleton L. Clark, F. W. Green and Carlo Vicario—the principals of Clark & Vicario Co., and, between them, the Manager for Industrial Sales of Nash Engineering Co.
6. Mr. and Mrs. C. E. Sisson of Mac Sim Bar Paper Co., Otsego, Mich., and Harry C. Moors (right), Vice Pres. of Beloit Iron Works, Beloit, Wis.

THE WINNAHS!

Baseball—Supts. beat Affiliates, 7 to 5.

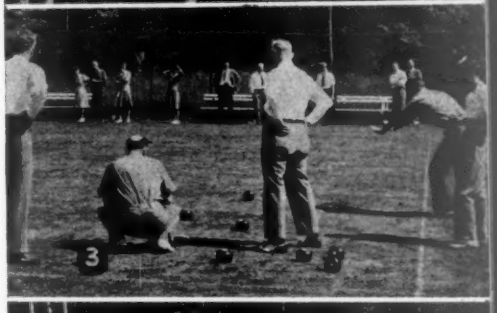
Golf (low gross) Jim Simpson, for supts.; Dave Burgess, for affiliates.

Three par holes—Ray Cotton; nearest pin—O. S. True; most 4s—Bob Larson, most 5s—W. S. Yunker; most 6s—G. Renegar; most 7s—W. E. Close; most 8s—D. Butterworth.

Women's putting—Mrs. Chas. Ludwig.

Bowling—Chas. Muzzy (men) and Mrs. Ollie Messner (women).

Horseshoes—Arthur Brosius.



AT SUPERINTENDENTS CONVENTION. Top row, left to right: Allan A. Lowe, Sandy Hill Iron & Brass Works, Hudson Falls, N. Y., illustrating his paper "New Thoughts on Drives, Screens and Vats for Cylinder Board Machine"; Merle Chaplin, consulting engineer, South Portland, Me., who delivered a paper on molded fiber products; Chauncy B. Smith, Noble & Wood Machine Co.; John Chandler, The Bristol Co., who contributed to the new developments forum. Lower row, left to right: At registration desk: Betty Wishart, daughter of Robert M. Wishart, Oxford Paper Co.; Ruth Gross; Bill Craigie, son of George W. Craigie, Secretary-Treasurer of Superintendents Assn.; and Theresa Tourangeau; Ernest E. Kertz, paper mill equipment representative from Portland, Ore.; and W. H. Brydges, Resident Manager, Bedford Pulp and Paper Co., Big Island, Va.

it's a subject on which we haven't yet got the complete answers."

Most of the subjects discussed in the wood room and woods operation session have been covered in detail in comparatively recent issues of PULP & PAPER INDUSTRY. But increased interest in these problems was shown in the attendance at the show chairmanned by L. C. H. Beighey, Hammermill Paper Co. and A. J. Mills, Sandy Hill Iron & Brass Works.

F. A. Soderberg, General Dyestuff Corp., New York, introduced a 31-letter word into the tissue session, and what is more he pronounced it. The word is "dihydroxydichlordiphenylmethane" and it is a chemical which overcomes biological rot in machine clothing. The non-toxic, economical chemical has proved useful in mildew proofing paper mill felts, Soderberg pointed out in his paper.

A popular feature of the tissue session, chairmanned by Joseph L. Hoolihan, Port Huron Sulphite & Paper Co., Port Huron, Michigan, was the motion picture, *"Paper, Pace Maker of Progress,"* produced by F. C. Huyck & Sons, Albany, N. Y., and reveiwed in our March issue.

Forum on Improvements

Wednesday's general conference featured a forum on improvements and developments in the paper industry. Stanford G. Blankinship, Perkins-Goodwin Co., New York, acted as general chairman of this session in which affiliate members took five minutes each in which to describe new equipment. The session was divided into woods operations, presided over by George Fuller, St. Croix Paper Co.; pulping, H. Karberg, Alliance Paper Mills; stock preparation; Charles Reese, Nekoosa-Edwards Paper Co.; paper machines and coating, Glen Sutton, Sutherland Paper Co., and engineering, Ray Bennett, Ecusta Paper Corp.

In this general discussion much interest was manifested in the portable barker which can operate at distances up to 500 miles from the mill. It developed that it is best adapted to longer lengths, and it was stated by several that longer length operations are becoming a trend toward lower costs, especially in spruce operations. Mr. Blankinship, a recent visitor to Sweden, told how he had seen the chain barker in operation there and that it was very efficient, even on frozen hardwoods.

Much interest was shown, too, in a motion picture demonstration of the gasoline-powered Disston chain saw. Daily care and maintenance was stressed as basic in the successful use of power saws in the woods.

Molded Products

Merle Chaplin, a consulting engineer of South Portland, Me., delivered a paper on molded fibre products during the Wednesday afternoon general session in which he outlined important changes coming up for the industry. Molded products, he said, were now small in tonnage, but growing in importance.

"There is," he said, "the pulp group, and the paper group in our industry—and now there comes a third, the molded products group. A curious condition shows itself here. The converter has the sales set-up to make a success of molded products, but often he does not have the stock preparation and sheet formation 'know how' of the paper mill. The paper mill has the manufacturing 'know-how,' but its sales set-up is often not the one required for molded products."

Therefore, Chaplin said, "the true molding plant may need to be something different from what we have now, a combination of the two. Certainly we see an increasing tendency toward end-use in the paper industry, and molded products fit in with that tendency."

An Art or a Science?

One of the most provocative

papers read at the convention was "Papermaking—An Art or a Science," by Dr. Frederick Frost, director, Research Laboratories, S. D. Warren Co., Cumberland Mills, Maine. (See Page 67.)

Dr. Frost raised the question as to whether it might be possible to alter our conception of papermaking. He drew a parallel between the operation of coating and the operation of sheet formation in the machine. Although the techniques differ, he said, there are intriguing similarities. Suppose Dr. Frost invited the speculation, the mill could attain perfect dispersal of fibers, and more quickly drain the water before coagulation takes place? We know, he said, that the faster the run, the less flocculation, the less necessity for a shake. Would it not be reasonable to suppose, he asked, that as speeds increase, shake might be eliminated altogether? The attainment of perfect dispersal of fibers would, Dr. Frost said, change papermaking from an art to a science. He suggested that it might be approached by means of a mechanical force applied behind the slice in the pond. Or it might be a new chemical which would peptize fibers so that every fiber would repel every other fibre and thus attain perfect dispersal.

Kraft and Board Groups

J. H. Allen, president of the Florida Pulp and Paper Company, Pensacola, was delayed in New York City on final details of his deal with St. Regis Paper Company for a new pulp mill in Florida, and withdrew his paper on "Effect of the Pulp and Paper Industry on Southern Forestry."

The Allen paper was to have been read at the kraft session on Thursday which was presided over by Claude A. Sorg, Sorg Paper Co., assisted by Percy H. Tigwell, Beloit Iron Works. The session therefore spotlighted entirely on "Remote Control of Stock Preparation Equipment" by J. W. Couture, chief engineer for Dilts Machine Works, which held double interest for those who had listened in on the stock preparation forum referred to earlier in this article.

W. K. Metcalf, J. O. Ross Engineering Corp., New York, spoke on "Benefits of the Board Machine Air System" at one of the board sessions. For illustration he showed a graph indicating savings based on fifty cents per 1,000 pounds steam cost on a 300-day operating year for production up to 200 tons. He showed that simple formulae are available for calculating roughly the volume of air to be handled on either a single paper machine or the entire mill production, giving both the exhaust volume and the supply volume. The paper included a discussion of benefits from recovery systems, and including white water heating, economizers, and fresh water heating.

PAPERMAKING—SCIENCE OR ART?

The above is title of a paper given at the Poland Spring convention which many in attendance thought was one of the most provocative and distinguished pieces of writing on the entire program. Read it in full on Page 67.

Other Papers

"The Converter Needs More Than Paper" was the expressive title of a paper delivered by Lloyd Parry, chief chemist, Nashua Gummed and Coated Paper Co., Nashua, New Hampshire.

What the converter needs these days, he said, is something more than "the product of a mechanized ancient art." He warned that converters are going to begin to wonder why fibers other than cellulose may not be made into a felted web—because he sees materials such as glass and plastics being spun and woven.

"Can the papermaker make his product to a new order of precision?" Mr. Parry asked: "I mean an order of precision approaching that of the materials which the converter adds to paper. After precision, the converter is going to want variety. Wet strength properties will be more widely useful." Mr. Parry warned that the converter is no longer the complacent individual he once was. "In 25 years he's had all the new products of synthetic chemistry spread out for his use," the speaker said. "The converter is about ready now to give paper a hard, critical scrutiny."

Sam Bratton, Pusey and Jones Corporation, gave the superintendents a brief blackboard talk on the proper location of rope carriers on paper machines, leading toward a decrease in the time the paper is off the reel and, consequently, increasing production.

Still another interesting affiliate contribution was from R. T. Barnes, Jr., of International Nickel, who described postwar developments in nickel and nickel alloys such as "Z" nickel and the "K" Monel, as well as new applications for older materials such as Monel beater bars, bed plates, jordan fillings, and paper machine rolls.

F. A. Faust, The Bristol Co., briefly described their various devices of measurement. Control of pH in the paper industry was also discussed by Mr. Faust.

A "package unit" for digestor liquor measuring, automatic cook control for alkaline cooking, for sulfite cooking, for pulp washer control, and black liquor evaporator control, was described by W. S. Yunker, assistant sales manager for the pulp and paper division of Foxboro Co.

Social Events

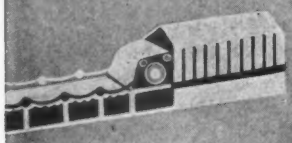
High points on the social side of the convention program were the buffet luncheon built around Maine lobster, and the cocktail party given by the Allied Industrial Affiliates. Both events were driven indoors by a threat of inclement weather which never actually materialized. Nevertheless, the various famous "greens" of the Poland Spring area were used plenty for golf, putting contests, horseshoe pitching, bowling, softball contests, and plain ordinary constitutionals to settle down bountiful New England meals on the American plan. In addition to the sports, there was a lot of old fashioned rocker-chair riding on the long porches, and the ladies got in their bridge. Ray Barton chairmanned the hospitality committee in addition to carrying on as president, and Mrs. Barton was chairman for the ladies' events. A. S. Hocker was sports chairman, and the golf events chief was Frank Eilers.

Allan B. Milham, president of Bryant Paper Co., Kalamazoo, Mich., was the amiable toastmaster at the big banquet on Wednesday night, and this event was followed by the second dance of the week with two orchestras alternating in the Poland Spring House until the small hours of Thursday. The final dance was recessed for the Louis-Conn fight by radio; but two minutes after the start of the eighth round Mr. Louis allowed the affair to resume its course. Very little money changed hands as the loudspeakers quieted.

By Thursday noon the superintendents and the affiliates were drifting homeward by car and train and plane. It had been a good convention. Every superintendent there had problems ahead of him, in New England, in the deep South, in Canada and the Midwest, and on the Far West Coast. But for four days at least he had relaxed a little and he had learned something. For four days—as Maine went, so went the nation's superintendents.

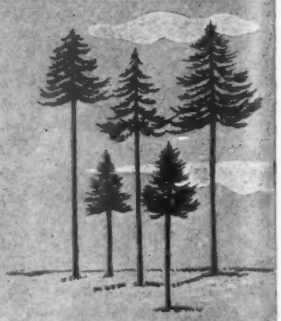
two decades of pioneering

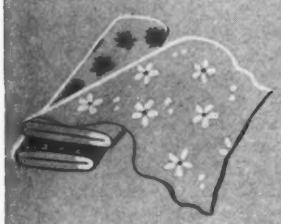
A Continuous Record of Product Development



Since 1926, when it pioneered bleached sulphite paper pulp from Western Hemlock, Rayonier has been making scientific history in the interest of its customers.

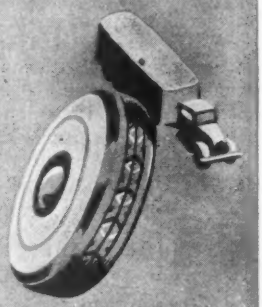
Through research, the company perfected a rayon pulp from a brand new source of supply — Southern Pine. This opened up a new agricultural and industrial economy in the South.

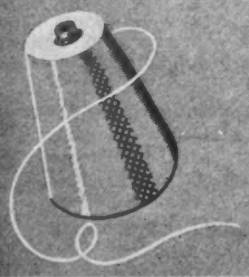




In 1930, the company introduced the first pulp from Western Hemlock for the viscose rayon industry. A dissolving pulp for use in making cellophane followed.

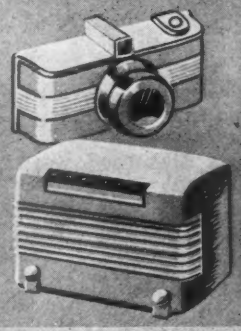
Another Rayonier pulp enabled the manufacture of high tenacity yarns for tire cord, contributing to one of the most outstanding advances made by the rayon industry.





Upsetting precedent, the next product was a pulp for the acetate rayon industry. A cellulose for nitrating purposes also was developed.

Special pulps have been developed also for making photographic papers, certain plastics and other cellulose-base products.



Pioneering requires initiative, vision, confidence and courage — a continuing search for new products and new uses. This is an underlying feature of Rayonier's customer program.

RAYONIER

INCORPORATED

Sales and Executive Offices: **122 East 42nd Street, New York 17, N.Y.**
Mills: **Hoquiam, Port Angeles and Shelton, Wash., and Fernandina, Fla.**

Publishers Learn Gravity of Wood Supply As Work Starts on Newsprint Mill

Reconstruction work at the West Tacoma Newsprint Co. 50-ton-a-day mill at West Tacoma, Wash., began June 18.

Fourteen newspapers are backing the enterprise and will divide the output to supplement their present supply. Seven are in California—the San Francisco Chronicle, Los Angeles Times, Oakland Tribune, San Diego Union-Tribune, and Sacramento, Fresno and Modesto Bees. One is in Oregon—the Eugene Register-Guard. Six are in Washington—the Aberdeen World, Tacoma News Tribune, Yakima Herald-Republic, Everett Herald, Bellingham Herald and Daily Olympian of Olympia.

Frank S. Baker, long a prominent Tacoma publisher, is president of the company which, as reported in these columns a month ago, purchased the mill from Everett Pulp & Paper Co.

Three shares in the new company are owned by the Los Angeles Times. Others have one each. Three of the participating papers are owned by Mr. Baker and his family—in Tacoma, Eugene and Port Angeles.

A Lesson in Forest Economics

Backers of this mill are getting a first-hand lesson in learning what a serious proposition it is to try to get the necessary wood supply to back any kind of pulp and paper enterprise these days.

They are learning, too, that there is mighty little wood of any grade—even treetops or wood formerly thought of as waste—that is available for newsprint manufacture while so many other more economically urgent demands are being made for the limited amount of cellulose that trees are producing for commercial use in the United States.

They only hope for a small supplemental newsprint supply from this mill, indicating they have also learned the lesson that it is now too late to start any big scale revival of newsprint manufacturing, a branch of this industry which was for so many years in the "step-child" class as far as protection and support from the government and the press was concerned.

Actually, the publishers who are participating in the Tacoma venture—including, as they do, the publishers in several smaller but important lumbering and pulp and paper communities—have been well informed over the years regarding the increasing problems and rising costs of wood supply facing those industries. They, personally, have been much better informed on this matter and more sympathetic toward the forest products industries than some of the more prominent chain and big city publishers.

Statement on Wood Supply

A press release issued by the new company makes this hopeful statement:

"Wood supplies are to be received for several weeks prior to the mill's active operation. It is contemplated local supplies of hemlock will be utilized from re-logging operations. Purchase of hemlock logs on Puget Sound will supplement the re-logged supply if necessary, with possibility that the wood yard at the plant will be planned so as to receive farmer pulpwood in 8-foot lengths direct by truck from individual contractors. Unloading and handling equipment will be available at the plant's wood lot within the next few weeks."

R. J. BURKE, Vice President of Mead Sales Co., Inc., of New York, affiliated with Mead Corp., who recently visited new Bloedel, Stewart & Welch unbleached sulfate pulp mill which is now under construction at Port Alberni, on west coast of Vancouver Island. Product of this mill, when completed, will be marketed by Mead Sales Co.

It is quite natural that the operators will try to obtain wood from any sources other than on the Puget Sound hemlock log market, which market has been virtually non-existent for many months.

Other problems may not be as difficult. As we reported last month the Pusey & Jones 142-inch trim Fourdrinier is in fine shape despite 9 years' idleness and so are the beaters. Grinders have been ordered. Cellulose Engineers, Inc., of Seattle, who are charged with putting the mill in shape, hope it will be operating around Jan. 1 next.

A grinder room is the only major addition necessary. Old frame buildings will be demolished to make room for wood storage.

Johnston of Pusey-Jones Appraises Tacoma Machine

R. S. Johnston, vice president of Pusey & Jones Corp., arrived in Tacoma, Wash., in early July to look over the former book machine in the old Cascade mill which the newly formed West Tacoma Newsprint Co. is planning to convert to newsprint.

Mr. Johnston was to make recommendations for the purpose of speeding up and increasing production on the machine.

Strike Raises Cost For British Columbia Mills

Pulp and paper production took a severe beating in British Columbia as a result of the six weeks' loggers' strike which was terminated during the third week in June.

One pulp mill was shut down completely for several weeks. Powell River Co., which had been aiming to set a new production record for newsprint, was compelled to curtail operations at least 15% and did not return to the six-day-week schedule until July 8.

Pacific Mills, Ltd., in a better log inventory position than most other units in the industry, reported the supply situation critical when the strike was finally called off.

Terms of the strike settlement, required a general increase of 15 cents an hour for loggers and a 44-hour week. It is estimated the increased cost of log production amounts to $3 per thousand feet.

Newsprint manufacturers estimated that the higher log prices, coupled with overtime to be paid under the provincial government's new hours-of-work legislation, will increase cost of producing newsprint in British Columbia by $7 a ton.

Installs Jones Refiner

E. D. Jones & Sons Co., Pittsfield, Mass., is installing a Leviathan Refiner (driven by a 700-hp. motor) in the mill of Taggart Corp., Oswego, N. Y.

OPPOSITE IS SCALE DRAWING of the National Paper Products Co. mill shown in photograph on this page. Efficient lay-out of this tissue-towel operation is indicated in this drawing.

ON NEW YORK'S Black River—one of the world's great arteries of pulp and paper industries—is situated the National Paper Products Co.

TISSUE INDUSTRY EXPANDS— NEW PRODUCTS FROM CARTHAGE

With the postwar market looming immediate and large, the tissue industry in the United States is fast adding to its sinews as one of the important phases of the pulp and paper industry as a whole.

A relatively young development, it was producing only 77,000 tons in 1909, only 190,000 tons in 1919, but in the "normal" year of 1939 it had jumped to 665,000 tons and made another leap to its record high level of 982,000 tons in 1942.

RAY SCHADT, Resident Manager, National Paper Products Co., Carthage, N. Y. He assumed duties after service in U. S. army during war.

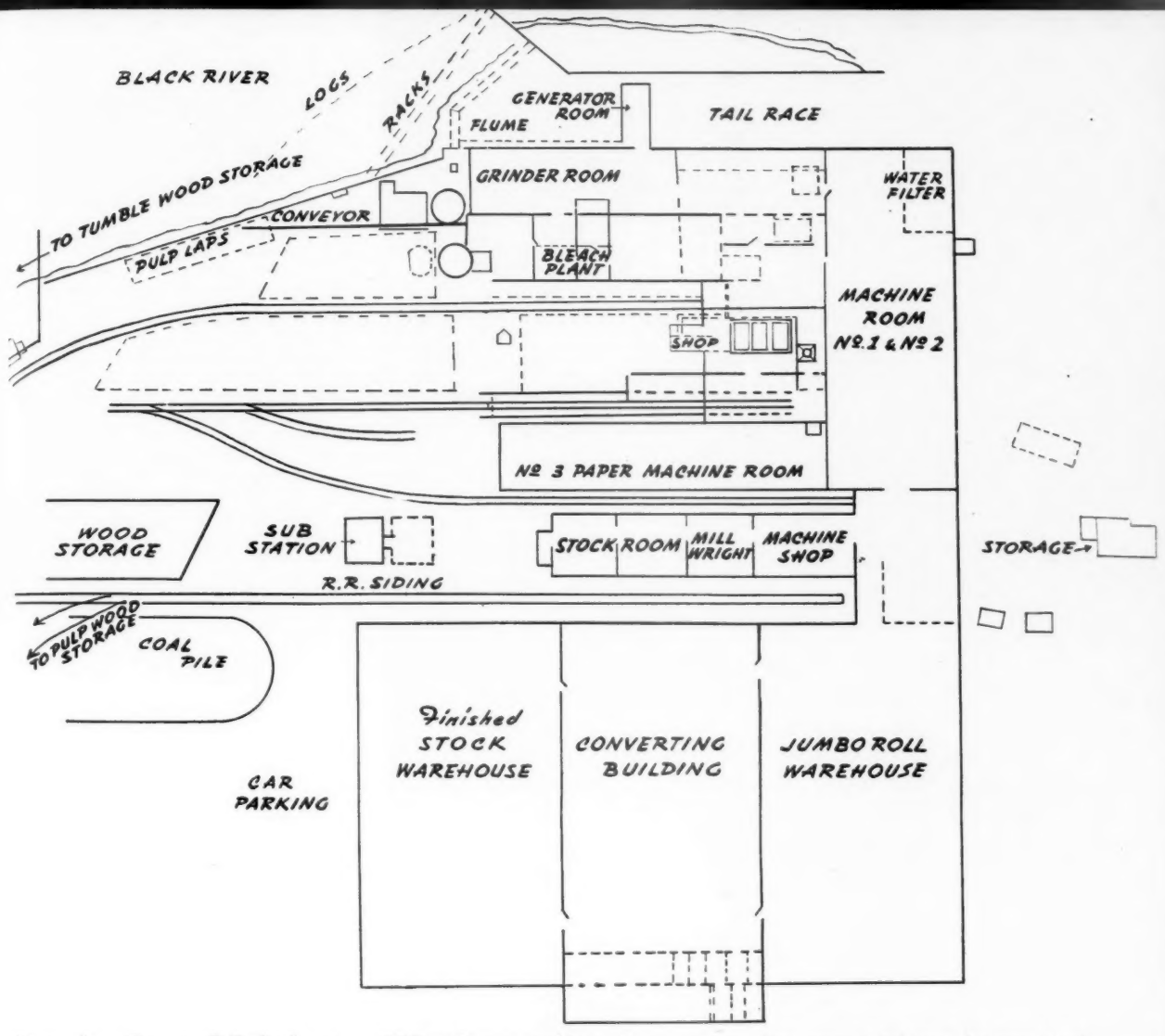
The later war years naturally saw a reduction in tissue, although certain types strengthened almost to normal demand—such as tissue for precision instrument lenses, or toweling for industrial plants. Production was off only 11,000—16,000 tons in 1943 and 1944, but climbed right back to over 981,000 tons in 1945. Tissue had many No. 1 uses in the war, as indicated by the fact that tissue mills often received priorities on both pulp and chemical supplies in order to produce in quantity and speed.

But the great user of tissue is a civilized nation at peace. The great hold that facial tissue, for instance, had on the woman's market was dramatically illustrated when queues formed to buy the reduced stocks at retail stores. The whisper that a certain drug or department store had facial tissue was enough to cause a stampede in Seattle or Roanoke, Boston or Los Angeles. The public began to realize that tissue was a "must," that it was right up there with cigarets and nylons as a national habit.

Facial tissues, paper wadding for hospitals and other purposes, are finding new vogues and the improvement of quality has been such that a big postwar demand can be safely anticipated.

(See editorial "Watch Your Neighbor" on page 15).

The faith of the industry in the future is expressed in dollars and cents investments in new equipment. Some of the orders were placed before the war, the majority during the war. Personal Products Corp., Milltown, N. J., is installing two Bagley & Sewall 142-inch machines, one for facial tissue, the other for wadding. In Canada, Dominion Cellulose is readying a 130-inch tissue mill, and word is that Pond's is to add a 145-inch tissue machine to its equipment and thus to its sales of Pond's extract for the complexion. Scott Paper Co. has started new machines at re-opened Fort Edwards mill in New York. A 134-inch Bagley & Sewall Fourdrinier is going in at B-F-D's Ogdensburg mill for waxing and creping paper. Beloit machines made to Kimberly-Clark's design for cellulose wadding went in at Kapuskasing in Ontario and will go in K-C's Lakeview mill in Wisconsin. Beloit is making a tissue ma-



chine for Crown - Zellerbach at Camas.

At the Kennebec Division of the Hudson Pulp & Paper Co. they are installing a 162-inch Rice, Barton Yankee facial tissue machine, and Brown Co. in Berlin, N. Y., will have a toweling machine.

A Black-Clawson 160-inch tissue and fruit wrap machine is going in at the Fernstrom mill in California. At Bellingham, Wash., Pacific Coast Paper Mills will have a new tissue machine, dry creped tissue machine with a Black-Clawson wet end and Beloit Yankee dryer. There will be others, too.

A Visit to Carthage

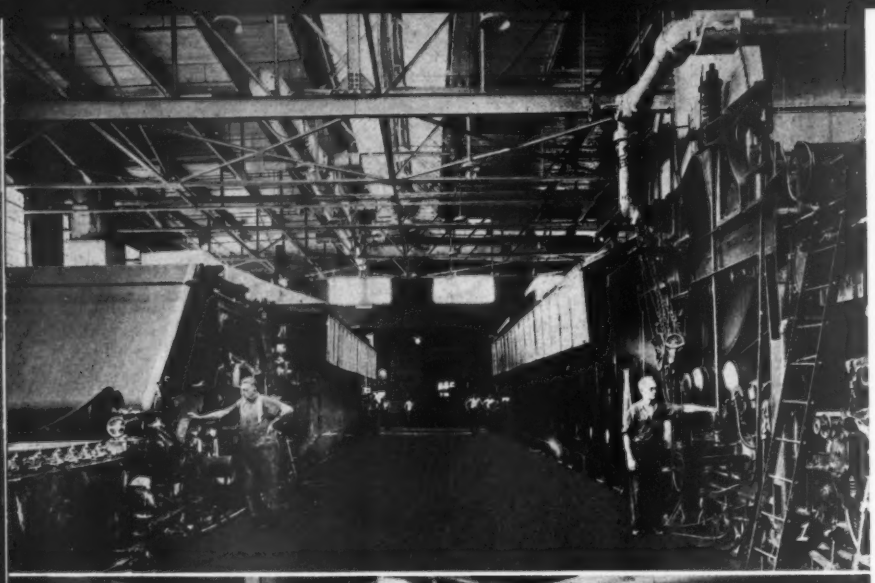
To have another look at an important part of the great tissue industry, PULP & PAPER INDUSTRY recently visited a pioneer in the field—National Paper Products Co., Carthage, N. Y., a division of Crown Zellerbach Corp. Crown Z went from San Francisco to Carthage back in 1915 with one small towel converting machine. Towel paper was bought from the Carthage Tissue Paper Mills and converted on one floor of the old Chauffty Warehouse on the bank of the Black River. These towels were Crown's famed "Public Service Towels" and the company claims them to be the start of the original interleaved paper towel service.

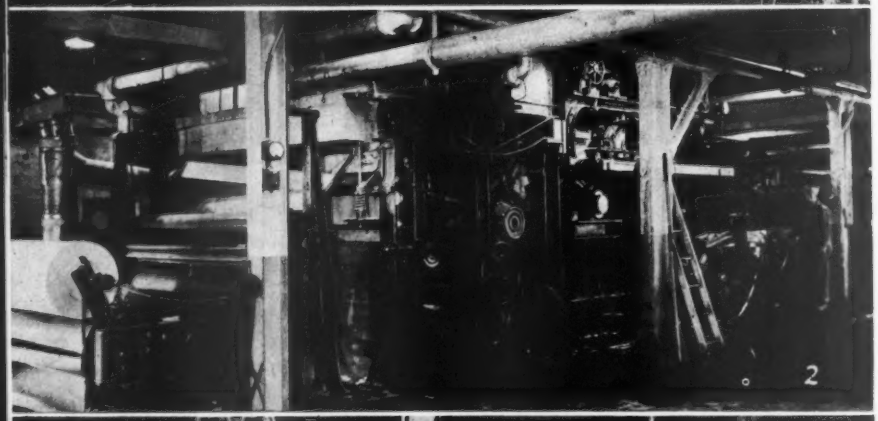
As recently as 1915 a public lavatory or wash room was modern if it supplied a roller cloth towel. Most such cloth towels went around the reels as many times as a Charlie Chaplin movie, but they were never funny. They spread disease and lost employees and customers. Yet they stayed around long after health departments insisted there should be no flies in a butcher shop. Paper towels were few and far between, almost non-existant. Before a paper towel could be sold, the customer had to be sold on sanitation. It was uphill for the salesman at first, but they were aided soon by municipal, state and federal legislation.

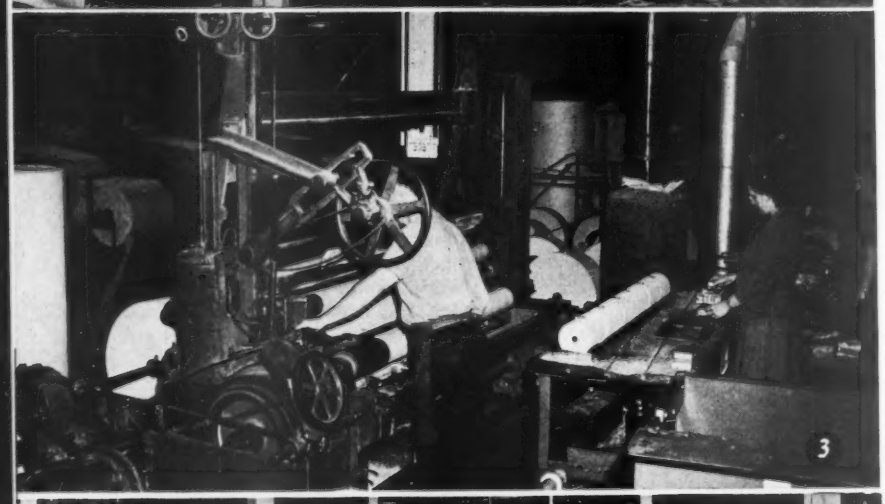
In 1917, National bought all of the properties of the Carthage Tissue Paper Mills, consisting of a four-machine mill, sulfite and groundwood mills and the Streeter Lake spruce tract. The old buildings still stand opposite the New York Central depot in Carthage and are used as warehouses now.

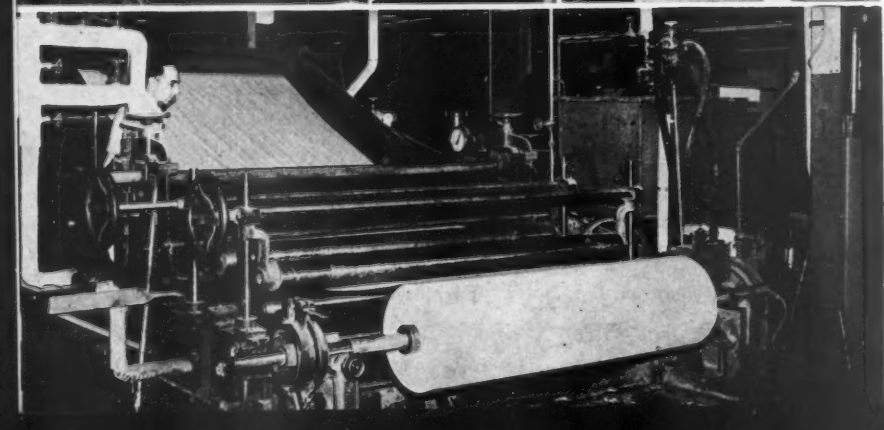
National towel cabinets began to go up on walls of wash and comfort rooms in factories, schools, restaurants, hospitals, office buildings, theatres, department stores, depots and, when the time came, gasoline stations. The slogan *Rub, Don't Blot,* became as familiar as *Twenty-three Skidoo* or *Oh, Yeah?*

By 1927 the National towels were selling at the rate of 250,000 cases a year, and Crown Z purchased and modernized the West End mill which was comprised of two large paper machines and a pulp mill. There









EQUIPMENT AT NATIONAL PAPER PRODUCTS CO.

1. Two Bagley & Sewall machines in same machine room. On left is No. 2 tissue machine which has 148-inch wire. On right is No. 1 toweling machine which has 133-inch wire.

2. No. 3 machine, also a Bagley & Sewall, which makes facial and diapers. On this machine, the Carthage mill claims to have been first to treat diaper tissue with baby oil right on the machine. Oil impregnation is done at dry end, near the camera. Installed in 1941, this machine has a 90½-inch wire; makes 9 tons a day.

3. Towel rewinder.

4. Waxing machine.

were constant improvements toward increased production and efficiency and by 1936 the mill was in its present form as a model of straight-line production on one level with all operations concentrated at the West End Mill.

The present mill covers 21 acres of the 34-acre property. The converting department is air conditioned and lighted without a shadow. The paper mill and the groundwood departments are no less up to date. Many new products have been added to the paper towels, including the popular "no-waste" interfold toilet tissue.

History

Earlier Carthage history was one of suffering. There were the tribulations of the war of 1812, a part of which was fought in the Black River area. Fate dogged the brave community throughout its earlier years. There were two great fires which swept out everything. There were industries that threatened to become ghosts: black salts, and pearl ashes, and pig iron, the tanneries and the lumbering. The people began to look for an industry that could use the tremendous natural resources of the Valley — the water and hydraulic power, the wealth of forests, and the connections by rail with the seaboard, the Great Lakes. It was seen that pulp and paper would build a larger and more solidly prosperous Carthage.

The groundwork was laid as early as 1868 when the Great Bend Paper and Pulp Co. began the manufacture of strawboard. In 1888, four years after the second great fire, M. R. Defendorf built the West Cathage Pulp Works. It employed four men, turned out three and four tons daily. A year later Spicer & Sons' mill was producing two and a half tons a day. Another three years passed, and Dr. E. T. Robinson struck upon a curious combination with the West End Pulp and Casket Co. (of all things!) In 1896, Peter Yousey and Augustus Maxwell founded the Island Paper

OTHER VIEWS OF NATIONAL PAPER PRODUCTS CO. EQUIPMENT:
1. This is first picture ever taken of Baby Diaper Machine which converts tissue into diapers.
2. Box facial machine.
3. Facial tissue box sealer.
4. Interfold toilet converters.

Co. on Tannery Island.

Tissue came to Carthage in 1897 in the shape of the Carthage Tissue Paper Co. It was soon turning out a production record: 15 tons of tissue in a 24-hour day! And in 1898 the wheels of the Sulphite Pulp Co. were in motion, turning out 17,000,000 pounds of sulfite pulp annually. Carthage was definitely on the way as a pulp and paper town. Carthage did not give up when the timber lines receded beyond its horizons. It was, in fact, one of the first U. S. communities to recognize that pulp and paper are a salvation and a promise to an industrial town that must look toward wood as the raw material of work.

Employe Relations

Since Crown Zellerbach and Carthage joined hands there has been a continual record of improvement, expansion and steady operation at National Paper Products. More than 300 men and women are employed there now and their average earnings are in the neighborhood of $460,000 annually—a very good neighborhood to be in, as they say in vaudeville.

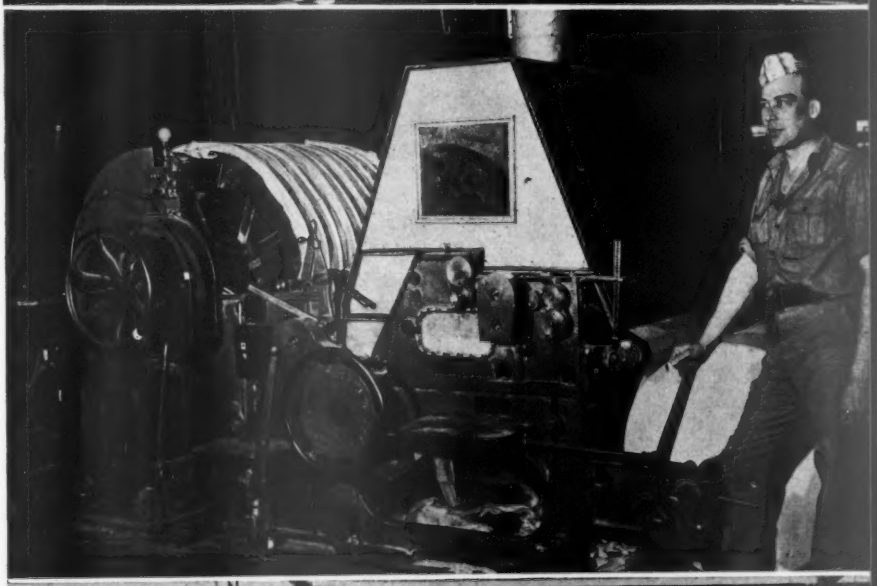
Employes think so, too. The service record of employes at the mill and at the New York office shows that more than 20% have been with the company for five to ten years, 16% for ten to 15 years, and 14% from 15-20 years. About 75% are family men, and about 60% own their own homes in Carthage or nearby.

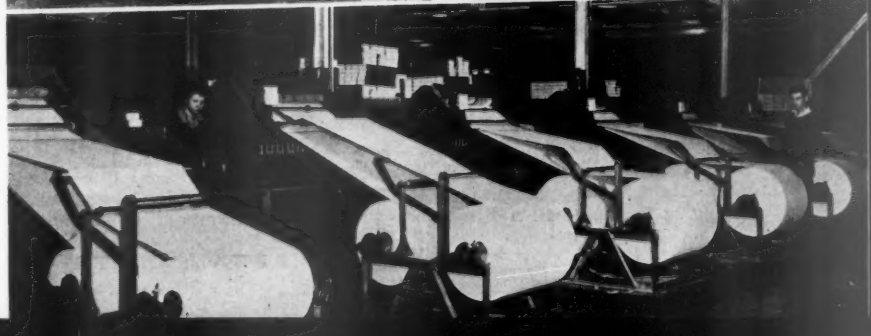
Charles Grondona, who divides his time between Carthage and the New York office of Crown at 122 East 42nd Street, is general manager of National, and was resident manager there from 1932 until 1938.

Under Ray Schadt, the resident manager, well known on the west coast, are: H. F. Carpenter, assistant manager; E. Loyst, superintendent of the paper mill; and I. E. Nichols, superintendent of converting. Pete Sinclair, now at West Linn, Ore., was resident manager at Carthage from 1938 until he was relieved by Mr. Schadt.

New Products

Today towels are not the only product from National at Carthage. The Commodore brand of facial and





AT NATIONAL PAPER PRODUCTS CO. pin dinner in Carthage, N. Y.:
Top row (left to rigfht): R. A. McDonald, Exec. Vice Pres. of Crown Z, awarding 30 yr. pin to E. Loyst, Paper Mill Supt., while Res. Mgr. Ray Schadt and G. F. Loftus, Office Mgr. and Chief Accountant, look on.

Second row (l. to r.): Ralph Bossuot and William Kenehan, 25-yr. winners; Stanley Clintsman, Gerald Chamberlain, Hugh O'Neil and Luther Shaw, 20-yr. winners.

Third row (l. to r.): Eleanor Lallier and Flora Pauvelle, 25-yr. winners; George Rushlow, Louise Hart and Floyd Valentine, 20-yr. winners.

roll toilet tissue was introduced in 1938, as well as cleansing tissues for home use. Meanwhile the towel line has expanded into a great number of varieties for industrial uses.

But the biggest and most recent news in National products are paper diapers. "Nata-Pax Flushaway Diapers" is the trade name for the National product. Drug stores and other retail outlets know them as toilet-dispensable diapers that build trade—and keep bringing the family into the store. They are "commended by Parents' Magazine Consumer Service Bureau" and National is the first to treat the diaper tissue with baby oil right at the machine.

A visit to the National mill would strengthen any careful mother's confidence in National's tissue diapers. The converting mill is as spotless as the day it began in 1937, the 45 men and the 90 women employed there might step into a food processing plant and not be out of place.

Description of Equipment

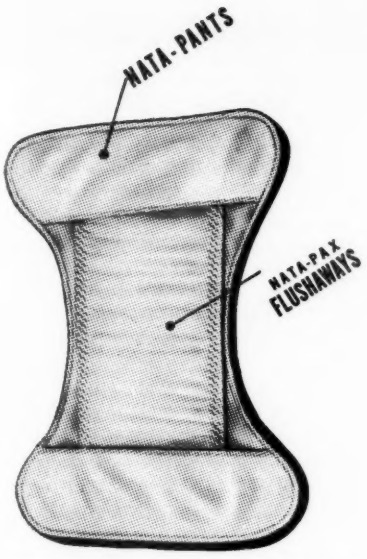
The No. 3 machine which makes facial and diapers was installed in 1941; it has a 90½-inch wire and a daily capacity of nine tons. The impregnation of the tissue with a light antiseptic baby oil takes place at the dry end. The machine which converts this tissue to diapers is a Crown-Zellerbach development, and the first photograph ever to be taken of it appears with this article.

The No. 1 machine at National makes toweling on a 133-inch wire; and the No. 2 tissue machine, with a 148-inch wire, is installed parallel with No. 1. All the paper machines were built or rebuilt by Bagley & Sewall of Watertown, N. Y.

Equipment includes five E. D. Jones beaters, two of them of 1400-lb. capacity and housed as part of the diaper machine unit. Three Jordans are of 1500, 3000, and 4000-pound capacity, and a Shartle pulper is included in the pulp mill equipment. The bleach plant uses the multi-stage bleach process, and the bleach liquor is made in the stock itself. Capacity is 130,000 pounds every 24 hours.

The compact little groundwood mill has seven grinders, four wet machines, a capacity of 60,000 pounds. But pulp comes also from the west and from Canada.

Translated into production it



HERE'S EXAMPLE of how tissue industry is helping Mother. . . . As indicated in this picture, the National Paper Products Co.'s "always-fresh, wet-proof" panties, known as "Nata-Pants," are made especially to hold the "Flushaways."

means 93,000 cases of all types of tissue every month. Tissue that has been produced at Carthage and gone through the cutters and winders and twin-folding machines, through to the packagers and sealers—to move into the vast warehouse on overhead roller conveyors in the shape of towels, toilet tissue, and the ever-growing diaper line.

Ninety-three thousand cases of tissue is a lot. But most of us use and throw away one or two paper towels every day. Women find facial tissue more and more among the indispensables of living. And more than 10,000,000 babies have been born since Pearl Harbor, and the mothers are young and modern and not at all averse to getting away from diaper washing.

Tissue is a great field in the pulp and paper industry. But not nearly as great as it will be.

Rossiter Is President

Ernest Rossiter, formerly president of the St. Lawrence Corp., Montreal, Canada, has been elected president of the Southern Paperboard Corp., succeeding George E. Dyke, who becomes chairman of the board.

Southern Paperboard Corp. is the new Robert Gair subsidiary building a new pulp and board mill at Savannah, Ga.

Gair Office in Savannah

Offices of the Southern Paperboard Corp., Gair subsidiary, which is to build a pulp and board mill in Savannah, Ga., have been opened in the Thomas Gamble Building in that city.

Book Paper Prices Go Up; Slump in Book Sales Looms

OPA ceiling prices on book paper sales to magazine publishers have been increased up to $1 per 1,000 lbs., but may not be higher than spot prices of the same manufacturer to wholesale merchants for the same grades.

This action is expected to make greater quantities of magazine paper available on contract sales at prices below those now prevailing on spot market sales.

Meanwhile, a postwar newsstand slump for consumer magazines—predicted as inevitable some months ago in these pages—is having company. The book industry realized in the latter part of June that the honeymoon was over. Bennett Cerf, prominent New York publisher, faced it bravely in *The Saturday Review*, and suspected there would be a paring of Fall book lists.

Most significant was a tendency on the part of large outlets to close out books and return to pre-war merchandise. Reasons: there is less mark-up on books and they take trained sales personnel. Besides, other merchandise begins to be available. Another blow to the book field seems to be the dawning discovery that the market for 25 cent pocket books is not at all the same market as the one represented by $2.50 volumes.

Nevertheless, most magazine leaders are still husky, and the book business is better than the industry once believed possible. Both hope that if the summer will pass and an uncertain autumn hurry by, then 1947 ought to be good. But it's dead certain that for the remainder of this year relatively little paper will be wanted for first novels and new magazines.

HERE IS AN EXAMPLE of an advertisement for paper diapers.

CPA Okays Bellingham Board Mill

Civilian Production Administration approval has been given to plans for the new $135,000 paperboard mill of Bellingham (Wash.) Paper Products Co., which will use a small portion of the unbleached sulfite pulp produced by Puget Sound Pulp & Timber Co. to make 40-50 tons of container material for the rapidly growing frozen foods industry in that locality.

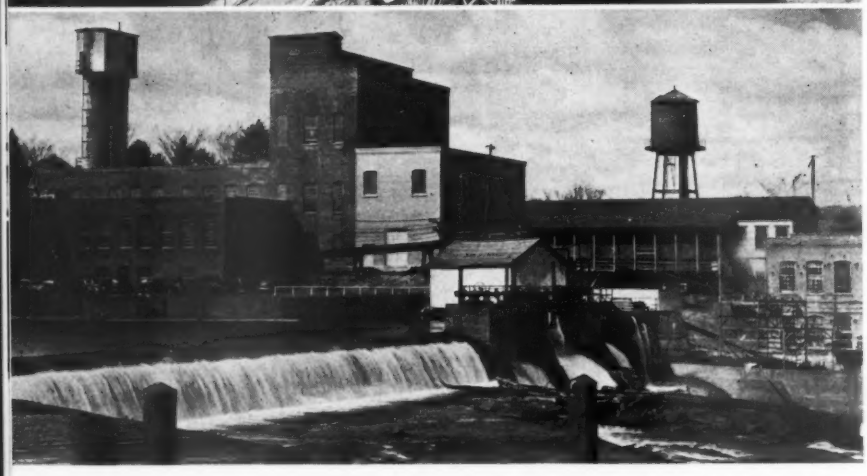
Incorporation papers were filed by Evans, McLaren & Lane, Seattle; R. H. Evans, of Seattle; Lawson P. Turcotte of Bellingham, and Joseph A. O'Reilly of Tacoma.

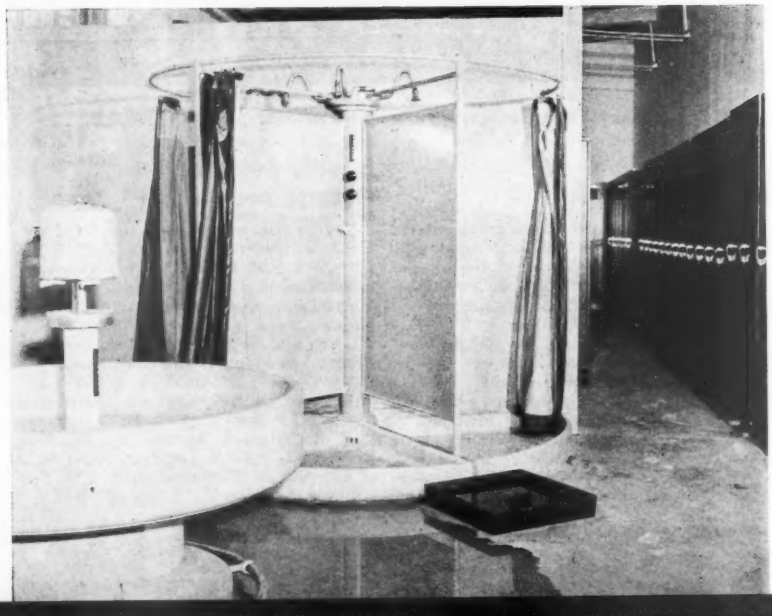
Neville Beaton Goes to Red Rock

Neville Beaton has been appointed resident manager of Brompton Pulp & Paper Co.'s Red Rock (Ont.) division.

Mr. Beaton will be in full charge of all mill and wood operations. F. D. Taylor continues as mill manager.

Born and educated in England, Mr. Beaton has spent 26 years in Canada. For 17 years he was with Powell River Co., latterly as resident engineer. After outbreak of World War II, he joined the staff of Canadian Wartime Shipbuilding. He recently served Marathon Paper Mills of Canada, Ltd., in connection with construction.





TOP PICTURE IS AERIAL VIEW OF GOULD PAPER CO., Lyons Falls, N. Y., whose extensive modernization program was announced last month in PULP & PAPER INDUSTRY by R. W. Shaver, Vice President and General Manager.

New steel and concrete building to house renovated and speeded up Bagley & Sewall Fourdrinier machines and provide ample office space will be built with foundations extending from channel bridge in upper left of this picture across to building on stream bank. This is at juncture of Moose and Black Rivers.

In middle picture the new brick 2-story structure (about center) is Gould Paper Co.'s new 30 by 78-foot bleach plant. Frame building in background and right of bleach plant is being razed for new concrete building for machines and offices.

Impco flat screens, deckers, filters and a thickener; a Stebbins acid settling tank; Dilts beater and E. D. Jones are among new equipment. For details see page 18, June PULP & PAPER INDUSTRY.

HERE'S ONE OF THE NEW SHOWER ROOMS, equipped with individual lockers for each employe, built recently at Gould Paper Co.'s Lyon Falls, N. Y., mill. This company, purchased last year by Continental Can Corp., is in midst of a sweeping rehabilitation and improvement program.

New Design Presses For Magazine Paper

The three full-color rotary presses being built in the West for Time, Inc., are of "radical design" and at the moment "purely experimental," Nick Wallace, in charge of Time-Life-Fortune production told PULP & PAPER INDUSTRY in New York last month.

Because of this Time, Inc., is not saying what the presses will do—but hopes are high around Rockefeller Center, New York. Time's designing engineers are working with the Joshua Hendy Iron Works, Sunnyvale, Calif.

The first press will be ready this fall. Time is already getting paper from Crown-Zellerbach Corp.'s mill at West Linn, Ore., for its western circulation. A new paper supply, to be machine-coated at the West Linn mill, according to the Consolidated Water Power & Paper Co., licensed coating process, will not be available until early 1947, or more probably, mid-1947.

As already announced, production of one of the two machines goes to Curtis publications, the other to Time and Life, all for western circulations.

Printing Industry Wants L-120 Back

The board of directors of Printing Industry of America, meeting this Spring at Hot Springs, Virginia, authorized its officers "to take whatever action necessary to prevent the further sale of paper mills if such sales will interfere with the fair distribution of supplies."

Most observers thought that this effort to stem a tide would meet with that lack of success traditionally assigned to all tide-stemming. But the printers' association had an idea they thought worth trying: urging the re-establishment of Order L-120, the war-time "paper stretching" order. This proposal was turned down by the government.

Teach 'Em While They Are Young—

Teach 'em while they are young—that might be a good slogan for forest-using industries. In Wisconsin, on the Columbia River in the West, and in the South, the pulp and paper mills are cognizant of the value of forest instruction for youth and are putting it in actual practice.

Here is what the South is doing—which may be an example for other companies to emulate. Each year, Southern farm boys are sent in increasing numbers to summer camps. Expenses are paid by cooperating members of the South's pulp and paper industry.

In one or two weeks camping under direction of the Southern Pulpwood Conservation Association, these youths combine the worthwhile lessons of forest management with wholesome recreation.

The boys are taught how to manage their timber crop on the farm to best advantage for continuous income, control of forest fires which destroy timber values, collection and propagation of pine tree seed, transplanting of seedlings, and estimation of timber crops. This training comes as a broadening experience in practical forest matters. It includes the selection of trees for cutting for respective utilization for pulpwood, sawlogs, fuelwood, ties, veneer blocks, poles and piling.

The boys admitted to the camps range from 15 years as an absolute minimum to 17 and sometimes 18 years of age. Their selection is based upon showings made in forestry work, either in a supplemental project or individual enterprise. Their demonstrated interest and abilities conveys an assurance that their stay in camp will prove fruitful.

The Future Farmers of America is the largest farm boy organization in the world with an active membership of approximately 200,000, of which 36,000 are in six seaboard South Atlantic states. The vocational agricultural program provides a ready source of competitors for the annual camps. There are thousands also in 4-H Clubs.

The annual boys' forestry camp for Florida was started by the Florida Forest Park Service in 1935, and has been successfully conducted

VIEWS AT BOYS' CAMPS sponsored by Southern U. S. pulp and paper industry.
Top View: Boys from Florida Forest Farmers of America camp learn to operate portable saw owned by Florida state. Part of their marketing lessons.
Middle: Boys watch demonstration of tree-marking with spray gun.
Below: At Florida's Oustree nursery, boys learn about growing slash pine seedlings. Pulp and paper mills in Wisconsin and Washington likewise have sponsored tree-planting by Boy Scouts and other boys' groups.
Small inset picture (lower left) shows 4-H Cub Forestry Camp cabins in Laura S. Walker Park in Georgia.

since. It is estimated that over 1,200 boys have attended that camp.

The Florida site enjoys many advantages. It is located on the historic Sante Fe River at O'Leno recreational area, about six miles north of High Springs, Fla. The location is 22 miles from Lake City, where, in addition to woods industries, there is a National Forest where projects are conducted by the Southern Forest Experiment Station. Thirty miles in the other direction at Gainesville, Fla., are the educational facilities of the University of Florida.

Less than a half mile downstream, the Santa Fe River disappears underground, to reappear four miles away. This natural bridge was the focal point for all early Indian and pioneer trails in Florida.

Subsequent to its successful demonstration in Florida, the boys' forestry camp was included in the educational program of the Southern Pulpwood Conservation Association, of which H. J. Malsberger (formerly with Florida Forest and Park Service) is general manager and forester. As promoted by the association, pulp and paper mills in each state, whether members of the organization or not, join in financing a camp.

Attendance at these industry-sponsored camps have ranged in the past from 50 to 100 boys each. The first camps sponsored by the industry were in Florida, Georgia, North Carolina and Virginia. In 1946 camps will be held in all southern pulpwood states except South Carolina and Mississippi.

Camp costs are approximately $10 per week for each boy, the total expense being pro rated among the supporting mills.

It is the objective of the Southern Pulpwood Conservation Association to encourage the operation of these camps throughout the ten southern states where similar educational activities are not now engaged in by other agencies. This is only one phase of the educational and action program undertaken by the association to bring about better care and treatment of the forestry resources of the South.

Another phase of activity of the association is the encouragement of free distribution of pine seedlings by Southern pulp and paper mills. During the four years from 1941 to 1945 the Southern industry purchased and gave away 19,000,000 seedlings to about 6,000 land owners. Of the nine participating mills and one pulpwood producer, all except one mill were members of the Association.

Fulton, N. Y., Tissue Mill Plans New Paper Machine

Installation of a new Teall converting machine and plans for a third paper machine have been announced by R. F. Baker, president of the Velvet Tissue Products Co. A 40′ x 228′ steel and concrete building was built at the Fulton, N. Y., mill to accommodate the convertor, which is 186 feet long and handles 125 24″ rolls of paper.

Velvet manufactures cleansing tissues exclusively, and the new installation converts from rolls to 9″ x 10″ sheets, and finally produces the tissues packed 501 sheets to the box.

Mr. Baker, who was honorably discharged from the army with rank of lieutenant last year, also states that a new 154″ paper machine will be installed in the near future. The mill now operates two 90-inch cylinder machines.

In the field of employee relations, he points to the fact that of 22 employees who left the plant to serve in the armed forces, all have now returned to their old jobs.

New rest rooms were built recently for the employes, where free hot coffee and hot donuts are served all workers during two 15-minute breaks each day, and the installation of a radio in the room where female employes handle the boxes and operate the sealing machine.

"A happy employe is a productive employe," says Mr. Baker, "therefore, whatever helps the worker, in the long run benefits industry."

New 250-Ton Per Day Machine For Canadian Newsprint Mill

Bowater's Newfoundland Pulp and Paper Mills, Ltd., plans installation of a new four-roll machine in its newsprint mill at Corner Brook.

This will raise capacity of the mill by 75,000 tons to more than 300,000 tons annually (250 tons per day increase). The new unit is expected to be in operation within two years.

Cost of the expansion program is estimated at about $7,000,000.

Present operations and plant of Bowater's were described in some detail in the March issue of PULP AND PAPER INDUSTRY.

The reported expansion is indicative of the progress being made on Newfoundland now that wartime brakes have been removed. Last year, Newfoundland exported newsprint to the value of $12.6 million, an increase of nearly $1.5 million over the previous year.

All workable pulpwood limits on Newfoundland are held by two companies—Bowater's and the Anglo-Newfoundland Development Co., the latter having been established by the late Lord Northcliffe, British press peer, in 1909. The Bowater's mill is a subsidiary of the Bowater's Paper Mills of England.

During 1945 Anglo-Newfoundland operated at capacity for the first ten months but production was curtailed owing to shortage of pulpwood. Production included newsprint in rolls, dry baled groundwood and wrappers. Experiments in the production of laminated board were continued. A total of 105,200 long tons of paper was exported, plus 30,600 long tons of pulp.

Pacific Chain Speeds Work On New $250,000 Portland Plant

Construction of a new $250,000 plant in Portland, Ore., is being pushed to completion by Pacific Chain and Manufacturing Co., which turned out through its old Portland plant, affiliates and licensees more than half of all anchor chain manufactured in the U. S. and Canada during the war.

The new plant, going up on a 12¼-acre tract that was part of the Guilds Lake federal war housing project, is of steel and aluminum atop four-foot high concrete walls. The structure is 265 feet long and 140 feet wide. Craneways 350 feet long extend through the building and beyond over the loading area. The two craneways were put up while the war housing area was being cleared.

Robert S. Miller, Pacific Chain's president, said the plant would start operations about June 15 with 100 workers and expand until about 200 were employed. The plant will make welded and riveted chain, chain attachments and fabricated steel products for industrial uses. Much of the plant's production will be chain for the pulp and paper industry.

A new office building also is part of the project on Yeon Avenue at St. Helens Road near the Willamette River in Portland's Northwest industrial area.

THE MAN IN THE MIDDLE

He's the Foreman, and the $64 Question Is What's Management Going to Do About Him

By Edward A. Jackman

Assistant Personnel Manager, Oxford Paper Co., Rumford, Maine.

(A paper presented Superintendents' National Convention in Poland Spring, Maine, last month).

For the past 15 years the foreman has been the man in the middle. He has been the center of attention for both management and labor and his activities have been reviewed critically by both sides. He has been in the middle of the labor-management struggle.

Do you remember the great drive of the unions between 1930 and 1940? Do you remember the sit-down strike and the development of the C.I.O.? One of the favorite grievances of unions during that period was the foreman. The unions accused the foreman of favoritism, of partiality, of mismanagement and a score of other hideous crimes too numerous to mention. If you could believe the unions' organizational propaganda — working men were forced into unions to seek protection from that monster—the foreman.

The unions yelled so long and lustily that management soon started to doubt the ability of the foremen. In fact, it wasn't to long before management openly admitted the inefficiency of their chosen representatives. As soon as management realized the nature of the problem, sweeping reforms were promised through a cure-all known as foreman training. Experts who could train the foremen in six easy lessons came from all directions. First the unions attacked the foremen, then management followed suit, and finally management sought to clarify the situation by confusing the issue and by belittling the foremen's stature in the organization.

In the late 30's and early 40's one of the most widely discussed subjects in industrial relations was "foreman training." Suddenly the country was at war and then the great hue and cry became production and more production.

As the tempo of this demand for goods increased, the foreman regained some of his stature in the industrial family. Once again he became an important cog in the machine. His stature increased as the war progressed. In many instances it was recognized that his skill and knowledge contributed materially to the record produtcion of all war materials.

Suddenly something happened — the Foremans' Association of America crashed the headlines and in

The author—Edward Jackman, of Oxford Paper Co.

Case No. 7-R-1884, March 26, 1945, in re: Packard Motor Car Co. and Foremans' Association of America, the National Labor Relations Board announced:

"A bargaining unit composed of foremen in modern mass industry is appropriate for purposes of collective bargaining under the N.L.R.A.; prior contrary decisions are overruled."

Can you imagine the audacity of the creature to do a thing like that; biting the hand that has led him and fed him through these years, turning a cold shoulder to those who have protected him and sheltered him, deliberately destroying the organization he had helped to build. Now, he too, has struck a mortal blow at free enterprise.

Again in the Middle

Again the foreman is in the middle of the union-management struggle.

The great strife of the 30's was not hard to understand. It was clever union propaganda. But why has the foreman suddenly switched his affection from his master to his old adversary?

For years he has seen the men and women who work for him and who are union members get more pay, get increased vacation benefits, more job security, better working conditions and a host of other concessions—while the foreman has had little or nothing. It is only natural that the foreman should want to play the same game — "gimmie something for nothing and I'll pay $1.50 a month dues."

The foreman has seen his position change from an important one to a minor one in the industrial set-up. No longer is he the boss of his own department. He cannot hire, fire or discipline and in many organizations, he is not allowed to make recommendations regarding employes. In the matter of production, his hands are tied because management has bargained production standards with the union. Many of the functions he formerly performed are now the duty of some service department. Management holds him responsible yet fails to give him the necessary tools to carry out his responsibilities. His prestige is gone, his hands are tied, and he does not like it.

From my personal observation it seems obvious that many foremen dislike their jobs. They don't feel happy as foremen. Much of this is due to the way foremen are selected. Usually we choose a man who had been a good steady, loyal employee, who was never late for work, who never quit early, who never made any trouble in the department, who never took time off without permission, who worked all the extras we wanted him to work, who was faithful in the performance of his duties, and excellent in the operation of his machine. We selected him as a foreman because he was a good workman and not because he possessed the qualities of leadership.

No wonder he is unhappy in his foreman's job—he is not qualified for it. His training and temperament are not adapted to good foremanship. We failed to pick the right man and we failed to help him. He received very little pre-foreman training and he received no further training after he took the job—yet

PAPER · · · America's 6th Industry

PAPER CORD FOR RUG-BACKING

(NEWS ITEM: *Paper yarn is replacing jute in the manufacture of rug-backing.*)

Rug-backing yarn, made of Kraft paper with high wet strength, is being used instead of jute on a large percentage of domestic rugs. It is unusually smooth, lies flat and sheds water. This new paper yarn prolongs the life of carpet pile and keeps rugs new-looking longer.

Paper bags for vacuum cleaners . . . paper tape to record sound . . . paper cans for frozen foods . . . New uses for paper calling for new standards of lightness and toughness, new standards of quality in performance. New responsibilities—new opportunities for the Pulp and Paper Industry.

The Puseyjones Organization is now devoting itself completely to the design and construction of Paper-Making Machinery built to new high standards of speed and efficiency, and to the modernization of existing machines.

Among the new machines under construction by Puseyjones are three of the largest and fastest Fourdrinier Machines, one for book and high grade printing, one for white paper for bags, and one for Kraft liner board; also one Cylinder machine of record size and speed for the manufacture of floor covering felt. Other machines are under construction for the manufacture of M. G. Kraft specialties, facial tissues, and high grade bristols.

Puseyjones Engineers will welcome the opportunity to work with you in solving production problems.

THE PUSEY AND JONES CORPORATION
Established 1848. Builders of Paper-Making Machinery
Wilmington 99, Delaware, U. S. A.

THE SIGN OF TRADE MARK

FOREMAN "PROBLEM" CALLED BIGGEST ISSUE FACING INDUSTRY TODAY

In the 1946 North American Review Number of PULP & PAPER INDUSTRY this report was made in the lead article on "Labor Relations":

"One Southern mill manager told PULP & PAPER INDUSTRY that the most urgent labor matter for mills today is to get foremen *"on management's side of the table."*

The paper which perhaps made the greatest impression and caused the most comment at the Superintendents' National Convention at Poland Spring, Maine, last month is the one published on this page—a brilliant presentation of the "problem" of the foreman. In this paper, Mr. Jackman gets right down to cases and he asks: "What's management going to do about it?"

In the feature article of the North American Review Number—which was an "on-the-spot" survey by our editors of employe policies of management in all the big pulp and paper regions of the continent—more than a page was devoted to the foreman. Here are some of the points brought out in that article:

". . . the company is usually such a nebulous quantity to most workers that the immediate supervision of any man represents the company to him . . . (the foreman) actually becomes spokesman for the company."

". . . imparting knowledge (of company plans) to foremen prevents them from being put on the spot. The foreman 'belongs' and if he can inform, he makes the men 'belong' with him."

One resident manager said: " . . . we have to call the foremen in or even sub-foremen because we must sell any idea to these men first. If we do not get their cooperation through selling the idea to them, we just do not have an idea."

The article tells about dinner meetings and other regular meetings bringing in foremen at such mills as Kalamazoo Vegetable Parchment Co., Nekoosa-Edwards Paper Co., Bryant Paper Co., the Pulp Division of Weyerhaeuser Timber Co., and Brunswick Pulp & Paper Co., and how these have built up company loyalty and mill production among these men.

he was considered a part of management.

In the grievance procedure negotiated by the company and the union, the foreman is usually included as the first step. Frequently he is by-passed with the approval of management. In some companies he is not allowed to make a decision on a grievance unless he first consults with higher management and then learns his answer verbatim. All too frequently he is told what to say without being given the reason for his answer. This type of action breaks down his morale because he is belittled in the eyes of his employes and his prestige is diminished because he is not allowed to discharge the functions of his job. If he is a part of the written grievance procedure—make him a part of the real grievance procedure.

Left Out in Cold

Frequently the foreman has no way of presenting his personal grievances. He must talk with his own boss and that is as far as he is allowed to go. Beyond that is sacred territory, reserved for only the selected few. Why not allow him the same rights as the employees who work for him. They are allowed to present their grievances to top management.

In the cumbersome procedure of "going through proper channels" the foreman is frequently the last man in the company to be advised of company policy. The union, through its shop steward system, sends messages through its organization quickly and efficiently. All too frequently the foreman is told for the first time by a shop steward about some new policy. The foreman just loves that.

Management rarely consults the foreman about problems in his own department. His knowledge gained by long experience is frequently ignored by the service departments of his company. He is told what to do and how to do it and he is expected to accept the instructions without a question. If he does make a suggestion he is reminded that the company pays experts in the personnel, research or engineering departments to handle such matters. If the company listens to the foreman, it may be to humor him. Rarely does the company eagerly seek the advice of the foreman.

Finally the matter of pay must be mentioned. The foreman's earnings in many cases is about the same as the earnings of the employes in his department; and in many cases it is less. When the worker is called on for overtime he does it for his love of the company. Prior to the war there were real differentials between the earnings of these two groups. During the war the workers received pay increases because of the political astuteness of the union in dealing with the War Labor Board. The foreman received little or nothing because the company could not satisfy the treasury department, consequently in many cases differentials in pay ceased to exist.

To illustrate the magnitude of this problem let us look at some of the recent increases given in this industry. A large number of companies gave their workers 15c an hour for 40 hours—that is $6.00. Some of these companies did not give their foreman an increase, others gave 5% and some gave more. With a 5% increase the foreman's salary would have to be $120 per week before he would receive as much as his employes.

Do you remember the large number of strikes in the automobile industry that swept the country in the 30's? These strikes set off a union drive that reached all corners of the country. Recently we have witnessed more strikes in the same industry — but these strikes were for recognition of foremans' unions. Will the results of the last strikes in the automobile industry parallel the results of the strikes of the 30's? It looks as if they would In the 30-day period from March 7 to April 7, the N.L.R.B. announced 18 decisions favoring the organization of foremen and the pace since then has been even faster. In those 18 decisions the following industries were represented: mining and smelting, paper, automobile, electrical appliances, chemical, printing, machine shop, metal fabrication, meat packing and food processing—10 different industries. It is obvious that this present drive is not confined to one industry or to one location but is nation-wide.

Up to Management

The day is here when management must make a decision!

Do we really want the foreman as a part of management? Are we willing to pay the price to make the foreman a part of management? It would be much easier to say the foreman is not a part of management.

Do you think foremen in our industry want to join unions or do you think they want to be a part of management? I am sure that I do not know the answer for the industry as a whole—but the foremen I know personally tell me that they would prefer to be a part of management. I am led to believe by other personnel men that foremen in their plants prefer to be a part of management. A foreman told me recently, "I am getting sick of being kicked by both the company and the union. I don't mind getting kicked by one crowd but two against one is *too much.*"

There are a number of steps man-

In the Revolutionary period citizens were urged to save rags to relieve the acute paper shortage.
From "A Pictorial History of Paper" published by Bulkley, Dunton.

PULP PAPER

DOMESTIC EXPORT IMPORT

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agement can take to solve this problem.

We must improve our methods of selecting foremen. We must select men who are leaders, and who are temperamentally able to withstand the strain of the job. We need men with the ability to be leaders in addition to their ability as machine tenders. We must recognize the fact that foremen are managers of manpower and their job is to get others to do things for them and for the company. Foremen must be able to direct, control and motivate those under their supervision.

We should develop a program of continuous education for foremen. I say education rather than training because the program must be broad in scope, not merely limited to the operation of their machines. Foremen not only need specific information related to their own departments, but they need much supplementary information. We should utilize the lecture, the conference and direct contacts to broaden their scope. What material should be included in this program? Why not let foremen have a voice in determining what they want and need? This education of foremen will be a long, tiresome, costly program. It must be continuous to be successful. Results can not be achieved in a day or in a month and the program can not be a success unless it receives the wholehearted backing of foremen and top management.

One of the most difficult steps we must take is to make foremen a part of active management. We must include them in the company's communication system. They should receive information from the company as quickly and as accurately as the shop steward is advised by the union. We must include them in the consultive organization. We must give them prestige in their own organization. Foremen can be advised of company policy through the foremen's manual. Better still have them assist in the preparation of such a manual by analyzing their duties in relation to standard policies and practices and by calling top management's attention to any omissions or discrepancies. In this way foremen will gain a fuller knowledge of their own job and its place in the organization. Set up committees of foremen to recommend and discuss policy. The quality of their contributions will surprise you. Be sure that the foreman has an opportunity to participate in recommendations that involve him or his department. Let them have representation at union negotiations

ROBERT I. THIEME, who became Technical Director at Soundview Pulp Co., Everett, Wash., when N. W. Coster was promoted to General Superintendent recently. Mr. Coster's former duties were divided between Mr. Thieme and Adof Orup, who was made Research Director.
Mr. Thieme returned to Soundview after serving five years in Uncle Sam's Navy, being discharged with rank of Commander. His service included 16 months of service commanding the U. S. S. in action in the Pacific.

and let them present the supervisory viewpoint. Make the company's communication system a two way affair —both up and down. Make it easy for foremen to be a part of management. They will contribute materially to the success of management if you will give them the opportunity to be a part of management.

Give them status in the organization. They deserve proper working conditions, good offices and individual recognition. When they do an excellent job, let them know their performance has been recognized and let the rest of the organization know it too. Don't bawl them out in front of their employees and don't belittle them in front of the union. Remember that foremen are human beings and they deserve to be treated with at least the same amount of individual consideration from their superiors as they in turn expect from the foremen.

To make them a part of active management give them praise when it is due, ask them for their ideas, keep them advised of policy and plans, take them into your confidence and be fair and sincere in your daily dealings with them. Remember the front door to active management must swing both ways.

Foremen are one of the most important keys to successful labor relations. In order to participate successfully in the grievance procedure they need sufficient authority and knowledge to allow them to function properly. The union will find out quickly if the foremen are really a part of the grievance procedure. Labor relations will improve if the foremen will and can settle grievances. Many foremen are reluctant to participate actively in grievances because they fear loss of prestige if they are wrong. Foremen who are part of management will quickly grasp the importance of their being an integral part of this procedure. Let's make them an active factor in the grievance procedure—not just a mouthpiece for some higher authority.

The unions have made great drives on seniority and security in the past years. These drives have substantially increased the security of their members and have lessened fears about loss of jobs. Foremen see this in their daily work and wonder what security they have in their jobs. They should know their positions in the organization and what will happen to them in a time of depression and lay-off. Have the foremen complete knowledge of their rights and privileges above those of the workmen? Do they know about sick leave plans, pensions, and other factors of security? Make them feel that their jobs are secure.

The Salary Problem

Finally, there is the relatively unimportant factor of money. Since all foremen work for their love for work instead of their love for money, this subject should not be discussed at all. As long as unions talk about money we are forced to do likewise. In many companies this matter of compensation has been very carefully studied and adequate programs have been established. In other companies foremen's salaries are such a closely guarded secret that the salary structure is completely inadequate. There are several points that should be considered in a study of salaries.

1. Foremen should earn more money than the men they supervise.
2. Some type of job evaluation should be used to establish a definite salary relationship between all positions in the organization.
3. Foremen should participate financially in increased productivity caused by their own efforts. They should also share in any cost reduction occasioned by their own efforts. Reward them for good management.
4. The foremen's basic salary

should be reviewed frequently in light of their contributions to the success of the organization.

5. If foremen are required to give more than a normal amount of time to their jobs, pay them accordingly.

To obtain a true picture of this salary problem compare the earnings of workers and foremen for 1940 or 1941. Then make the same comparison for 1945 or 1946. Draw your own conclusions.

Probably many of you come from companies where the status of foremen is no problem and it may be difficult for you to believe that the industry is faced with an important problem. I want to tell you three true stories. These stories sound fantastic but they actually happened.

A friend of mine was a foreman in a plant. His department was remodeled and enlarged by the addition of new machines and about 50 new employees. The tempo of production was materially increased and the job of being foreman became a strenuous one. A rate increase was negotiated by the company and the union for the workers in this department. The superintendent of the company promised my friend a substantial raise. He waited weeks and months and nothing happened. After nine months of patient waiting, he asked the superintendent the status of his raise. The superintendent was much surprised to find out the raise had not been granted and immediately promised to do something about it. In a few days the superintendent reported back that a mistake had been made and the raise would be coming shortly. The raise did not come so the comedy was repeated twice more in the next four months. On the fourth attempt the superintendent became incensed and told my friend to see the general manager. He tried to see the big boss and eleven weeks to the day after his first attempt he got an audience. After he told his story the general manager filled with righteous indignation and accused him of all the sins in the book. My friend realized that he had not solved his problem, so he offered his resignation and a 30-day notice. The general manager beat him to it and fired him on the spot 16 months after the farce started. My friend is a red hot prospect for a foreman's union.

This next story sounds like a "Believe it or not." One Monday morning a foreman came to work and found a crew of workmen dismantling all the equipment and machinery in his department. When

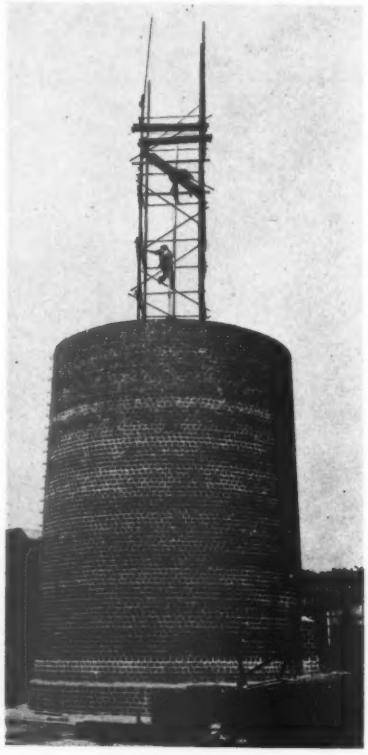
STANLEY C. ADAMS, whose appointment as Chief Chemist at Fernstrom Paper Mills, Pomona, Calif., is announced by F. O. Fernstrom, President. Mr. Adams was formerly assistant professor of chemistry at University of Oregon.

he asked his boss what was happening he learned that new machinery was being installed. Upon further investigation, he found that the personnel department had laid off the employes by mailing notices to their homes and that the whole matter had been discussed by the labor - management committee. I wonder who neglected to tell the foreman- Do you think the foreman is a part of management?

Story No. 3: A foreman in a large manufacturing company through the company's suggestion system contributed an idea involving another department that saved over $100,000 in labor costs. The suggestion system in this company was open to all employes except those engaged in research, engineering and top management. Foremen were not allowed to contribute suggestions pertaining to their own department. This foreman, by the rules of the game, was entitled to $5,000. One day the president of the company summoned this foreman to the office. The president thanked him profusely and then proceeded to tell him that since he was a foreman and part of management it was his duty to contribute to the success of the company and could not expect any cash reward. Today that foreman is president of the foremen's union at that plant and he is proud of the fact that he has taken the boys out on strike five times in the last nine months. Fantastic—but true.

The problem before us is a complex one. Do we really want foremen as part of management. If the answer is "Yes," we must carefully and truthfully analyze every phase of our relationship with foremen. If the answer is "No" it is obvious what procedure will be followed.

Whatever we decide to do, let us take foremen out of the middle of the labor-management struggle. You determine whether they are to be part of labor or management.



HERE IS partially completed 250-ft. high acid-resisting brick mortar chimney, at Savannah, Ga., plant of Union Bag & Paper Corp.

This is part of new $500,000 electrical precipitator installation, which will be largest unit of kind in this industry. Gases from 9 recovery furnaces of big kraft mill will pass through 5 precipitators to mammoth stack.

The famous "monkey men" of Alfons Custodis Chimney Construction Co., New York and Chicago, building this stack, also recently built similar brick-mortar 375 ft. stack which carries off fumes at Shelton, Wash., division of Rayonier Incorporated, from the furnaces which burn waste liquor in the new ammonia-base system of cooking sulfite pulp at that mill.

This Savannah chimney has 5 ft. x 6 ft. opening at base for entrance of electric shovel trucks to clean out bottom of stack.

Contract for Gair Mill

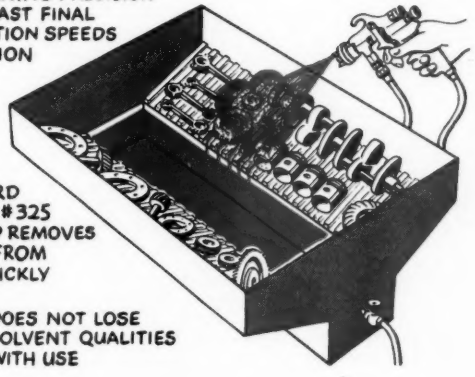
Contract for construction in Savannah, Ga., of the $9,000,000 pulp and paper mill of the Southern Paperboard Corp., subsidiary of Robert Gair, Inc., has been awarded to Daniel Construction Co., Greenville, S. C. Work will begin in September. The company has allocated $3,000,000 for forest land acquisition.

STANDARD ENGINEERS NOTEBOOK

HAS FLASH POINT OVER 100° F., BUT DRIES RELATIVELY FAST

STANDARD THINNER #325 IS A WATER-WHITE, STRAIGHT-RUN, UNCOMPOUNDED PETROLEUM SOLVENT

ESPECIALLY SUITABLE FOR CLEANING PRECISION PARTS. FAST FINAL EVAPORATION SPEEDS PRODUCTION



STANDARD THINNER #325 CUTS AND REMOVES GREASE FROM PARTS QUICKLY

DOES NOT LOSE SOLVENT QUALITIES WITH USE

Water-white solvent speeds metal cleaning

The expense of cleaning tools, parts and other metal is reduced for many operators by the use of Standard Thinner No. 325. It has a faster final dry rate than most solvents used for this purpose, yet presents less fire hazard because its flash point is over 100°F.

Standard Thinner No. 325 does not lose any of its superior cleaning qualities in use. Contaminants readily settle out and allow removal of the clean solvent. In manufacturing plants, it is especially suitable for cleaning precision parts where slow evaporation would retard production.

A clear, water-white product, Standard Thinner No. 325 is straight run and does not contain compounds of any kind. It is made to rigid specifications from the heart-cut of selected crude stocks. This assures constant uniformity.

No. 325 is only one of a complete line of petroleum solvents made by Standard of California.

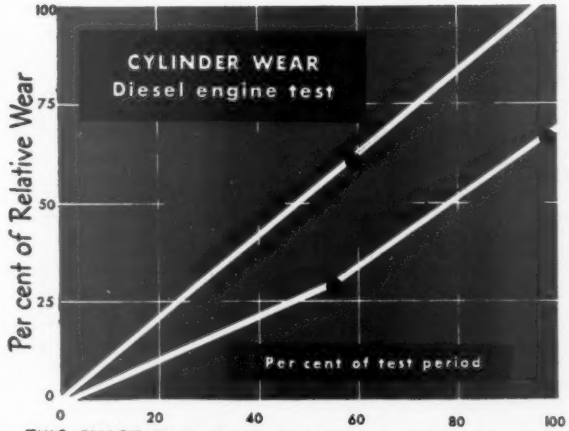
RPM DELO Oil cuts Diesel cylinder wear

Excessive wear, commonly occurring on upper cylinder walls in Diesel engines, may be reduced to a remarkable degree by switching to RPM DELO Diesel Engine Lubricating Oil.

RPM DELO Oil contains a special compound that gives it metal-adherent characteristics. Because of this quality and its natural ability to resist heat, RPM DELO Oil keeps a constant lubricant film on the entire surface of cylinders when engines are running. With the hot spots "wet" at all times, metal-to-metal contact is prevented.

The metal-adherent quality of RPM DELO Oil also keeps lubricant on cylinders and other parts when engines are idle. This assures instant lubrication when starting and reduces starting wear.

Other compounds in RPM DELO Oil remove carbon, prevent ring-sticking and corrosion, resist oxidation, and stop foaming, thus further minimizing wear on cylinders and other parts.



THIS CHART SHOWS THE EXTENT TO WHICH CYLINDER WEAR WAS REDUCED ON DIESEL ENGINE CYLINDERS THROUGH THE USE OF RPM DELO OIL

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FOR EVERY NEED A **STANDARD OF CALIFORNIA** JOB-PROVED PRODUCT

I. P. Co. Buys Container Plant

International Paper Co. has purchased the Scharff-Koken Manufacturing Co., which for many years has been engaged in the manufacture of shipping containers at St. Louis, Missouri. Its plant, which has a capacity of about 30,000 tons of containers per year, will supplement the present shipping container operations of International.

International proposes to operate the plant after July 1, with the present organization of Scharff-Koken. The plant will be known as the St. Louis plant of the Container Division of I. P. Co.

Also Buys Pure-Pak Plants

International Paper Co. later announced the purchase of Single Service Containers, Inc., which has been engaged in the manufacture of Pure-Pak paper milk containers in plants at Philadelphia and Kalamazoo, Mich. In addition to the production and sale of milk containers, Single Service provides its customers with the other materials—such as paraffin wax, adhesive, and stitching wire—required for finishing the milk containers.

International has been major supplier to Single Service of bleached kraft board.

Unusual Submarine Pipe For New Pulp Mill

An unusual underwater steel pipe installation is being made at Port Alberni, B. C., for the Bloedel, Stewart & Welch, Ltd., pulp mill, now under construction.

The job involves laying of more than 600 feet of welded 24-inch water pipe across the Somass River. The pipe has to conform with the contour of the river bottom, 30 feet at deepest spot.

Engineers originally planned to have sections joined by 25 complicated coupling devices by divers.

Wilf Hill of Hillside Iron Works, New Westminster, B. C., surveyed the project and undertook to lay the whole pipe, welded and in one long 600-foot section. It will be welded on the shore on skids. When ready, high tide will float it and it will be towed to position. Water will be admitted by valves, allowing bends to sink to the bottom.

Larry Thompson's Vacation Spot—Home

When Larry Thompson, superintendent of Personal Products, Milltown, N. J., goes on a vacation—he goes home.

A victim of the housing shortage, Mr. Thompson still maintains a residence in Glens Falls, N. Y., where he was located before going with the new tissue mill. Lakes like Schroon and the famous Lake George, near Glens Falls, are top vacation spots. So there is where Mr. Thompson went on a recent fishing and rest holiday.

Boiler Added by Mill

Installation of a new 170 h.p. Ames horizontal boiler and Flynn and Emerick automatic stoker at Oswego River Tissue Mills in Phoenix, N. Y., is announced by the mill management.

A 40' x 40' cement-block building was constructed earlier this year to house the installation. The boiler will provide auxiliary power, in addition to serving as heat source for heating and drying.

M & O Pioneers Again in Management

A new division of the research department of Minnesota and Ontario Paper Co., announced by M. S. Wunderlich, director, is to be known as the "commercial research department."

"The operation of business today requires classified information as never before," said Mr. Wunderlich, "and this new division will be staffed and equipped to assemble and interpret such factual data for management."

George Hardisty, for several years M & O assistant treasurer, has been appointed manager of commercial research, with offices in Minneapolis.

The return of Edgar A. Lauring to the research department in International Falls was also announced by Mr. Wunderlich, following two years' service in the armed forces.

Champion Retirement Plan Extended to Salaried Staff

Logan G. Thomson, president of Champion Paper and Fibre Co., announces adoption of a retirement income plan for salaried employees of the company at Hamilton, O.; Canton, N. C.; Houston, Tex., and Sandersville, Ga. Approximately 1100 employees are eligible.

The company will be responsible for purchase of past service retirement income, and payment for future service will be shared by company and employee.

The plan makes provision for retirement at age 65. It is possible, however, with company approval, for an employee to retire at reduced income within a period of ten years earlier.

Gen. Kabrich Joins Flintkote Co.

Brig. Gen. W. C. Kabrich, chief of technical div., Office of Chief of Chemical Warfare Service, U. S. War Department, during the war, has joined Flintkote Co., as assistant director of research at the central laboratory in East Rutherford, N. J. He has retired from the army after 30 years' service.

Varied Courses in Safety Given Key Men

Twenty men of the Puget Sound Pulp & Timber Co. operating and supervisory staff recently completed a five-weeks course in Safety First instruction conducted by Al Schactschneider, sawmill foreman and a qualified Red Cross instructor. Instruction in life saving was given by Melvin Bakkom, machine tender, and Kenneth Fox, fireman, and in use of respirators and gas masks by Sidney Collier, assistant superintendent.

Bethlehem Steel Promotion

Bethlehem Pacific Coast Steel Corp. has announced appointment of Edward G. English as executive assistant to H. H. Fuller, president. Mr. English was formerly manager of commercial research and supervisor of Pacific Coast mill scheduling.

Educated at the University of Missouri where he received a B.S. degree in civil engineering and majored in business and public administration, Mr. English joined Pacific Coast Steel Co., later acquired by Bethlehem, in Seattle in 1925.

Frank Hoar Manager Of G. D. Jenssen Co.

The G. D. Jenssen Co., Inc., has moved its head office from New York City to 363 Eastern Blvd., Watertown, N. Y., and Frank J. Hoar of that city has been appointed vice president and general manager, according to an announcement received from J. D. Jenssen, president.

Mr. Jenssen will continue to maintain an office at 103 Park Ave., New York City. The company supplies acid tower and circulating systems.

Dick Sandwell Back "Home" With Powell River

It was like coming home after a long absence for P. R. "Dick" Sandwell when he was appointed recently as chief engineer for Powell River Co. at head office in Vancouver, B. C.

The son of the late Percy Sanwell, consulting engineer who played an important role in planning and building Powell River and other British Columbia paper mills and allied construction, Dick Sandwell was educated at Powell River and he worked in the mills there during his summer vacations from the University of British Columbia.

He won a scholarship at the University of British Columbia and subsequently joined the Dominion Engineering Co. as assistant chief engineer. Soon after his father was chosen to direct the building of a newsprint mill in Tasmania, Dick joined him as resident engineer there.

A couple of years ago Dick Sandwell returned to Canada and joined Ontario Paper Co. as assistant chief engineer participating in the recent expansion program of that company at Thorold, Ont., and Baie Comeau, Que.

Only Woman Running a Pulp Mill

The Fort Miller Pulp & Paper Co., Fort Miller, N. Y., will soon install a new 51-inch Smith McCormick turbine, Miss A. M. Thorpe, president of the company, told PULP & PAPER INDUSTRY last month.

Miss Thorpe, probably the only woman actively operating a pulp mill in the U. S. or Canada, has been head of the Fort Miller mill for twenty-five years, taking over from her father who founded the company in the late nineteenth century. The mill, which made hanging paper, was burned several years ago and has not been rebuilt, but the groundwood pulp mill is still active and produces about 24 tons daily with three grinders and three presses. About 15 men are employed now.

Expansion in Vancouver

C. A. Bartram, president of Bartram Paper Products Co., Ltd., Vancouver, B. C., announces a $250,000 expansion program to more than double the plant's former capacity. New machines will produce printed cellophane packages for food products.

A Service For Brown Company Vets

Veterans returning to the employ of Brown Company, Berlin, N. H., receive free photostatic copies of their discharge papers, and the company files one copy in the office of the city clerk. The service is provided by the photographic laboratory which operates under the division of Research and Product Development.

The NEW LIGHTWEIGHT • LOW PRICED

"TIMBERHOG" GASOLINE SAWS!

Also available as 2 man unit — 24 and 30" capacity. Timberhog portable gas saw, equipped with dependable built-in power plant is ideal for operation anywhere — especially in remote sections.

MODEL No. 1

20" One Man Saw
52 lbs. $325.00

24" Two Man Saw
54 lbs. $335.00

30" Two Man Saw
57 lbs. $345.00

NO OTHER SAW HAS THIS BIG 4 COMBINATION!

HORSEPOWER: Light weight 4 H. P. gas engine, 4500 R.P.M., 2 cycle, air cooled, with strong die-cast aluminum or magnesium parts for durability — delivers power far in excess of load requirements.

LIGHTER WEIGHT: The lightest weight portable chain saw per horsepower available because of die-cast aluminum or magnesium parts and compact design. Maximum cutting power at minimum handling weight.

FUEL INJECTION: No carburetor troubles — positive fuel injection eliminates carburetor and enables motor to operate at 90 (or more) degree angle without adjustment or flooding.

LOW PRICED: The lowest price one-man portable chain saw per horse-power on the market today! The TIMBERHOG is economical to operate and the lowest in first cost and maintenance.

SPECIFICATIONS

ENGINE: 4 H. P. 4500 RPM single cylinder, two cycle, air-cooled.
BEARINGS: Anti-friction throughout.
FUEL SYSTEM: Positive fuel injector enables engine to operate at 90 degree angles or more.
IGNITION: High tension magnet with reverse flux, single coil, waterproof, adjustable.
TRANSMISSION: Specially heat-treated alloy gears — 3 to 1 ratio.
CHAIN: 5/16" kerf, 5/8" pitch, speed 1200 FPM.
OILING TO CHAIN: Positive hand pump.
CLUTCH: Automotic centrifugal.
CONNECTING ROD and CRANKSHAFT: Heat-treated steel forgings, hardened and ground.
GUIDE BAR: Alloy saw steel, adjustable for chain tension.

Address all inquiries to TIMBERHOG Saw Division

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"TIMBERHOG"
REED-PRENTICE CORP.
WORCESTER SAWS MASS., U.S.A.

Bill King of Oliver United Discussed Vacuum Saveall as Applied to White Water

With 53 members and guests present—one of the largest meetings in the organization's history—John Van Ounsem, technical director, Pioneer-Flintkote Co., conducted his first meeting as new chairman of the Paper Makers & Associates of Southern California, June 20 in Los Angeles.

W. W. King, sales engineer, Oliver United Filters, Inc., Oakland, Calif., was principal speaker, discussing the development of vacuum savealls and related equipment.

A color motion picture, "Paper—Pacemaker of Progress" was presented by F. C. Huyck & Sons.

Charman Ounsem named Frank Wheelock, production manager, Fibreboard Products Co., Los Angeles, as program chairman for 1946-47, and William A. Kinney, production manager, Flintkote, will again head the George M. Cunningham Award Committee to conduct a contest for best technical paper in the region for 1946-47.

Following is a slightly abridged version of Mr. King's paper:

By W. W. King

Oliver United Filters, Inc.

Although general principles on which all industrial filters are now constructed were known years ago, it has been necessary to work out a great many technical details to produce an operative filter. Most of the improvements have been made in the last 30 or 40 years.

Many attempts were made to produce a practical vacuum filter and most of these early productions were of the leaf type and, therefore, worked on the intermittent principle.

In the early 1900's, several prominent engineers were endeavoring to produce a filter which would operate continuously, and in 1907, Mr. E. L. Oliver designed, built and installed the first Oliver filter. This continuous vacuum drum filter was put into successful operation at the North Star Mine, Grass Valley, Calif.

The Oliver filter consists of a cylindrical drum mounted on horizontal trunnions. The peripherial surface of the cylinder or drum is divided into shallow compartments by division strips. Each compartment is covered with a special drainage grid which supports the filter cloth. The filter cloth is held in place, in most cases by spiral wire winding or by Acme bands which are strips of stainless steel ½" wide and .015" thick. From each compartment of the drum a suction pipe is carried through one of the trunnions to the automatic valve which controls both the application of the vacuum for forming the cake and the shutting off of the vacuum so that the sheet may be removed by the admission of the compressed air for the discharge of the cake.

The vacuum saveall is an adaptation of the conventional Oliver filter. In the saveall as in the case of all pulp filters, larger hydraulic capacity is required than with the filter for metallurgical or similar uses. Larger capacity is obtained by using larger filtrate piping in the drum, using a larger automatic valve and by correctly designing the sections to allow a quick get away of the filtrate.

W. W. KING, who gave paper before PASC in Los Angeles.

Twenty-five or 30 years ago the general belief among makers of high grade papers, and possibly among makers of the general run of papers, was that it was necessary to send most of the machine white water to the sewer. It was argued that the inclusion of white water solids in a sheet weakened the sheet and otherwise tended to reduce its quality.

Perhaps this conclusion was partly correct as little attention was paid to non-corrosive pipe lines, etc., in the mill and dirt and rust were considered a necessary evil. Much dirt could be kept out of the sheet by sending it to the sewer in the white water.

With the introduction of non-corrosive pipes, tile-lined wire and couch pits and slime control by chemical means, a method of saving and reusing paper machine white water was looked upon with more favor.

The necessity of conserving water and the fact that anti-stream pollution measures were being advocated also made it necessary to take care of the excess paper machine white water. Advancing cost of paper stock also made it attractive to recover the fiber passing out with the white water.

Savealls were gradually accepted as a necessity in most paper mills.

Previous to 1923 all paper mill white water was handled on savealls constructed like conventional cylinder deckers, or on so-called side hill savealls which consisted of an inclined screen over which white water flowed. The screen caught larger fibers and some fillers. A large percentage of fine fibers passed through the screen resulting in comparatively poor recovery of white water solids. A real need for a filter or saveall that would reduce fiber losses and also recover fine and costly fillers such as clay, pigments, etc., had been recognized for some time. During the year 1923-4 experimental installations were made in eastern mills but results were not considered sufficiently satisfactory to warrant the installation of vacuum type savealls.

First Use in West

In 1924 tests were made in a Pacific Coast mill and a commercial size saveall was installed early in 1925. At this time the plan of using an individual saveall for each paper machine and the addition of machine furnish as a filter aid or sweetener was developed. This addition of sweetener was the deciding factor in making the vacuum saveall a success.

Efficient saveall operation is obtained by adding sweetener stock to the white water so the sheet formed under vacuum is ⅛" to ¼" thickness. Mixture of sweetener stock and white water solids forms a porous sheet, and the water discharge is filtered through this sheet. Fine fibers and fillers are retained and returned with the sheet to the stock chest.

The amount of sweetener stock required is usually about 2½ times the weight of solids contained in the white water. As an example when white water contains 6.0 lbs. solids per 1000 gallons, enough sweetener stock should be added so the mixture sent to the saveall will contain 6.0 lbs. white water solids and 15.0 lbs. sweetener stock or a total of 21.0 pounds per thousand gallons.

Recoveries that can be made are dependent on character of stock and filler to be handled.

The sweetener used depends on type of paper being produced and type of sweetener available. In a newsprint mill most fiber in the white water is groundwood. Here the sulfite stock is used as a sweetener and in most cases the entire amount of sulfite is mixed with white water just ahead of the saveall. In mills where kraft or papers consisting mostly of sulfite are being made, unjordaned machine furnish is usually used as a sweetener.

The speed at which the cylinder on the saveall revolves is an important factor. It is desirable to run the cylinder at as low speed as possible and still get desired capacity and at the same time keep the unit down to a reasonable size. Most fibers that pass through the wire do so the instant the wire is submerged in the stock in the vat. Therefore, it is desirable to operate slowly so as to have as few emersions as possible per minute. The quantity of solids in the filtrate from the vacuum saveall run from ½" lb. to 1½" lbs. per 1000 gals., depending on character of white water being handled and kind of sweetener used.

Construction Materials

Materials of construction of a vacuum saveall are important and have undergone considerable revision. First savealls were made of steel and wood. As it became necessary to provide units that would resist corrosion and would not

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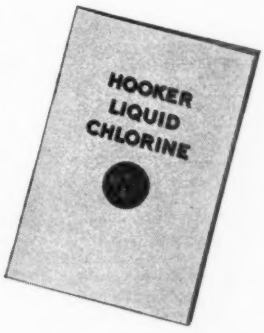

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contaminate stock it was necessary to go to copper bearing alloys and, in some cases, to stainless steel. In the past few years since such great strides have been made in use of rubber covering it has been found that for the majority of installations a rubber-covered saveall makes the ideal unit. In these cases, all machine parts that come in contact with either pulp or filtrate are rubber-covered, except only the facing wire and drainage deck which can be of either stainless steel, monel or bronze. Steel and wood and cast iron are being used in mills where the pulp is nearly neutral.

The flowsheet around the saveall has been pretty much standardized, although adaptations usually have to be made to suit each installation. The white water connection from the paper machine is made from the couch pit. The excess water from the wire pit overflows into the couch pit and we also have the couch showers and the trim from the sheet at this point. This white water from the couch pit is pumped to the flowbox on the saveall. The sweetener stock is added in the white water line where it is mixed with the white water. A further slight mixing occurs in the flowbox but the principle function of the flowbox is to evenly distribute the flow to the saveall vat.

Where the sheet from the saveall is sent depends on the type of paper being made. In the case of newsprint, the sheet is sent to the sulfite chest. In the case of kraft or sulfite paper, the sheet is usually returned to the machine chest. The filtrate from the saveall, as it is very low in fiber content is in most cases reused in the mill, although in some instances, it is desirable to send it to the sewer. It has been found generally advantageous to send 15 - 20% of well clarified whitewater out of the machine circuit. This is done primarily to prevent accumulation of dissolved substances which could induce foaming and promote slime growth.

Size as well as type is very important in saveall installations. It is almost as fatal to have a saveall too large as too small.

On some saveall installations a so-called two solution valve or head is used with which it is possible to make a separation of the filtrate. The first filtrate passing through the wire and consequently carrying a larger percentage of fiber and other solids is carried down one barometric drop leg. The clearer filtrate, that filtrate which actually passes through the mat of fibers already formed on the wire, is carried down a separate barometric drop leg. This separation is accomplished by proper spacing of the divisions or bridges in the valve or head on the saveall. All the cloudy filtrate is reused in the mill and a large portion of the clear filtrate can be returned. White water sent to sewer can be the so-called clear filtrate which contains a minimum of fiber and other solids.

In many saveall installations, particularly on units handling white water from paper machines using a comparatively free stock, the recovering of fiber and other solids is so good that separation of the filtrate is not practical.

Elected Vice President

Olivier Rolland has been elected vice-president of the Rolland Paper Co., Montreal.

Display Industries Are Sold on Paper

Clearly demonstrating the versatility of paper products, the annual Market Week of the National Association of Display Industries, at the Hotel New Yorker, New York, June 22-28, featured exhibits by almost 100 display firms and paper converters. The latest developments in display materials were exhibited at the New Yorker, the heaviest emphasis being placed on paper. The products shown ranged from decorative roll papers to molded paper mannequins and complete window display units, entirely of paper.

Prior to the war, the use of paper in the display industry was largely confined to crepe. Today, paper has permanently supplanted many other types of material, being universally accepted by display men, not as an expedient substitute, but as an ideal utility and creative medium, suited for almost every display need.

The general opinion of the display industry is clearly stated by George Sylvestri, head of the Sylvestri Art Mfg. Co. of Chicago, who says, "We are using more and more paper, being restricted only by its availability. With it, we are able to achieve artistic effects that cannot be duplicated with any other material."

The Sylvestri exhibit featured complete display units, with life size, molded paper figures, and paperboard backgrounds. Floorings of leatherette laminated on heavy kraft; mannequin costumes of crepe, colored to simulate stylized costumes; and paper draperies and hangings indicated the extent of paper versatility. The firm showed a series of miniature tableaux, depicting Christmas in 27 countries, consisting of paperboard shadow boxes with molded paper figurines.

Bulkley-Dunton featured grained leatherette and simulated wood veneer laminated on 6, 10 and 11 point kraft, in addition to specialty background papers with marble and mottled finishes. R-Tex Co. of New York displayed embossed, molded kraft which had been sprayed with two contrasting colors to emphasize highlights and shadows; a basket weave kraft for floorings; and heavy coated stock tubes spiralled with metallic foil.

Among the most unusual products shown was that of Facil Fabrics Co., Patterson, N. J., large scale converters, who manufacture "Facil-Fab," rayon laminated on 5, 12, and 13 point kraft. This material is used for artificial flowers and leaves, as lamp shade material, candy and jewelry box exteriors and linings, and show case linings. An additional item was a rayon lamination which, though on kraft, allowed a 33 1/3% stretch, to permit molding and "cupping" in specialty products.

Especially significant was the number of molded paper window mannequins being shown. Formerly made of plaster, mannequins were bulky, heavy and fragile. Molded paper obviates these disadvantages. The Allcock Mfg. Co., Ossining, N. Y., which manufactured molded paper products for the services, has converted entirely to production of mannequins and display figures. Courtnay Branderth, chairman of Allcock, said:

"Paper is the answer to all our problems. It permits us to manufacture our products faster, better, and at less cost."

Visitors to the New Yorker were charmed by the unusual array of mechanical animated displays being shown by W. L. Stensgaard & Associates of Chicago—all paper, except drive mechanism.

Buyers, representing every state and Canada, generally specified paper in placing orders. All those interviewed indicated they had successfully used paper for every phase of their display work, and would continue to do so.

Warren Gallegher, sales manager of Coy-Disbrow, said, "The day is not too far off when we will say, 'If it can't be made from paper, it can't be made at all.'"

Indicating the amount of paper consumed by the display industry, department stores use as many as 1,000 mannequins, with 10% annual replacement. Crepe tonnage consumed by the artificial flower industry in Southern California alone exceeds 500 tons annually. Albert Bliss, of Bliss Display Corp., cites his annual consumption as 100 tons. This is only one of more than 500 display houses in New York City alone.

Paper Men Elected To AFPI Offices

New trustees of the American Forest Products Industries, Inc., now an independent organization of forest industries concerning itself solely with forestry promotion and public information, has elected Corydon Wagner of Tacoma, Wash., president. He is vice president and treasurer of St. Paul & Tacoma Lumber Co.

Col. William B. Greeley, of Seattle, previously announced as new chairman of the trustees, was confirmed in this position.

Sydney Ferguson, president of Mead Corp., was elected trustee, as an additional representative of the pulp and paper industries.

Other officers elected were W. D. Welsh, Crown Zellerbach Corp., San Francisco; Walter J. Damtoft, Champion Paper & Fibre Co., Canton, N. C., and Leonard Carpenter, Minneapolis, vice presidents, and Marc L. Fleishel, Shamrock, Fla., treasurer.

The trustees, recently increased to 15, included, besides those mentioned above:

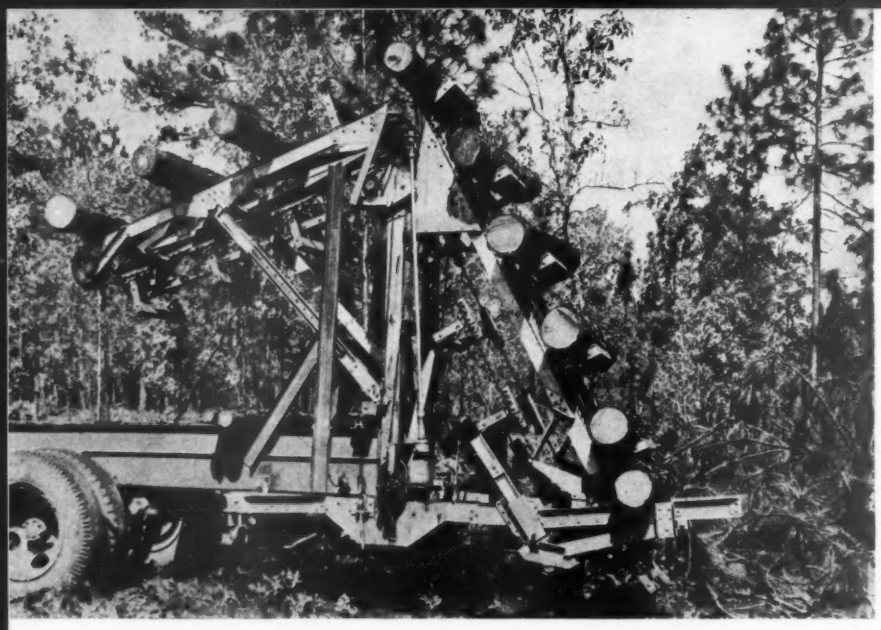
W. J. Bailey, West Virginia Pulp and Paper Co., New York; S. R. Black, Weyerhaeuser Sales Co., St. Paul; D. C. Everest, Marathon Corp., Rothschild, Wis.; and R. C. Winton, Winton Lumber Co., Minneapolis, the latter two were former WPB Pulp-Paper Division chairmen.

Joins Crossett

L. T. Sandborn, formerly associated with the late Guy C. Howard in production of vanillin from sulfite waste liquor in Wisconsin and more recently engaged in waste liquor research at Mellon Institute, has joined the research staff of Crossett Industries, Crossett, Ark.

Elmer, Paul Bunyan's moose hound, with his hind quarters sewed on upside down as a result of an axe accident, could run twice as far without tiring—shifting from one end to the other.

A reproduction of this incident from the fabulous life of Paul Bunyan—the eighth of a series—will be sent on request. It will contain no advertising.



Aluminum Pulpwood Loader Makes Handling Easy

Utilization of the lightness of aluminum to bring ease of handling in the woods is one of the features of the pulpwood mechanical loader perfected by James R. Clark, president, Rite Equipment, Inc., Mobile, Ala.

This loader, which is especially designed to be quickly attached or released to the rear end of a truck, has been owned and operated in the woods for over a six months' period by S. M. Adams, pulpwood dealer serving the Southern Kraft Division, International Paper Co. mill at Mobile. It is also available as a self-propelled unit mounted on rubber tired wheels. Still another model is designed for loading flat cars, gondolas, etc., also on rubber tired wheels so that it can be moved in any direction—like a sand crab.

The accompanying picture is the unit owned by Mr. Adams. It is mounted on the rear end of a 26-foot bed Ford truck with a Thornton axle. This truck can carry 5½ cords of wood. The picture was taken at the scene of operations about 7½ miles north of Bay Minette, Ala.

The loading unit shown in the picture is attached to the truck by locked toggle clamps. It weighs 1110 pounds and comes equipped with retractable skids useful in pulling it around in the woods if it is detached from the truck. In operation, it requires three men, of which two feed the pulpwood to the machine. It can be attached or detached from the truck in 10 minutes. The machine loads 31 pulpwood logs per minute.

The men loading the pulpwood do not have to lift it as high as the waist when the machine is on the back end of the truck. Where the machine has been in operation a percentage of the pulpwood has come from timber culls and has run as high as 18 in. diameter. The Engineer's Manual which gives weight of 54 lbs. per cu. ft. for wet pine logs would indicate a weight of 650 lbs. for a 5-ft. 3-in. log of 18 inch diameter.

The pulpwood loader assembly includes mechanical items of national reputation for excellence, such as the Twin Disc Clutch (Racine, Wisc.), a Briggs-Stratton (Milwaukee) 6-h.p. gasoline engine, Foote Bros. (Chicago) reduction gears, and a Boston mitre gear in a Rite Equipment designed box.

The Rite Equipment plant makes its own roller chain of aluminum of 14,500 lb. ultimate test but weighing only 1⅛ lb. per ft. It makes its own steel sprockets. The machine is ball-bearing throughout, and when operated by the hand clutch is on bronze bearings.

When mounted on rubber tired wheels as a self-propelled unit the machine can load pulpwood in the woods into any type or size truck, and can load into a railroad car. This type can be pulled from one location to another in the same manner as a two wheeled trailer. As a self-propelled unit in the woods it can turn in a 9-ft. radius.

Mr. Clark has made a standing offer to run through the woods with the loader mounted on a truck and pick up any pulpwood that has been left after the contractor has finished, and prove that he can make a neat profit at existing prices—if they will give him the wood found.

Used With Russian Jeep

Another successful demonstration of the value of the loader was in its use in connection with a special aluminum body on a Russian jeep.

The aluminum body was 9½ ft. long and was equipped with hinged stantions so they could be dropped and the load rolled off. The jeep over-all, with body, was 10 ft. 9 in. The special aluminum body weighed 63.2 lbs.

This special body loading machine equipped Russian jeep, with a two-man crew, went into the swamp 14 miles east of Bay Minette (Ala.) to recover pulpwood logs abandoned under normal operations. The jeep's special body was made by Rite Equipment, with a capacity of two cords. The jeep had dual tires all-around.

On this task the lift for pulpwood was only knee high, an important factor inasmuch as the wood was slick. The wood ran from 10 to 16 in. diameter and the jeep made an average of four trips per day to dry grounds where the regular trucks picked up the load. At this point, the machine loaded the big trucks.

The Russian jeep, specially equipped, brought out about 41 cords per week for a total of 200 cords of pulpwood that would otherwise have been lost. If the jeep bogged, the two men took off the loading machine, take a lead from the winch to a stump, and pull out. The soft spot would be filled with branches, etc., to give traction, and the jeep would be backed in to pick up the loader again. Sometimes it was necessary to unload the pulpwood, in which case the loader was used to pick up the wood when the track had been firmed for traction.

Mr. Clark is "sold" on the use of aluminum in the logging field. His contention is the lighter weight metal will rapidly recover a higher initial cost by (1) permitting logging under adverse conditions and (2) allowing heavier pay loads under favorable weather conditions.

Important News To Southern Industry

Indirectly important to the Southern pulp and paper industry, since it may indirectly influence how much land goes to pulpwood or to cotton, is the new deadly killer, 666, British war discovery which will be used to attack the cotton boll weevil, cotton aphid and cotton fleahopper.

It is being produced at Whitemarsh Laboratories of Penn Salt Manufacturing Co. and is rated 10 times as deadly as DDT.

Another factor influencing land use in the South will be mechanical cotton picking machinery.

Union Bag Stages Tours for Business Men

As a means of maintaining a friendly community attitude, the Union Bag and Paper Corp. has been conducting special tours of its large integrated mill, to which leading business men of Savannah are invited.

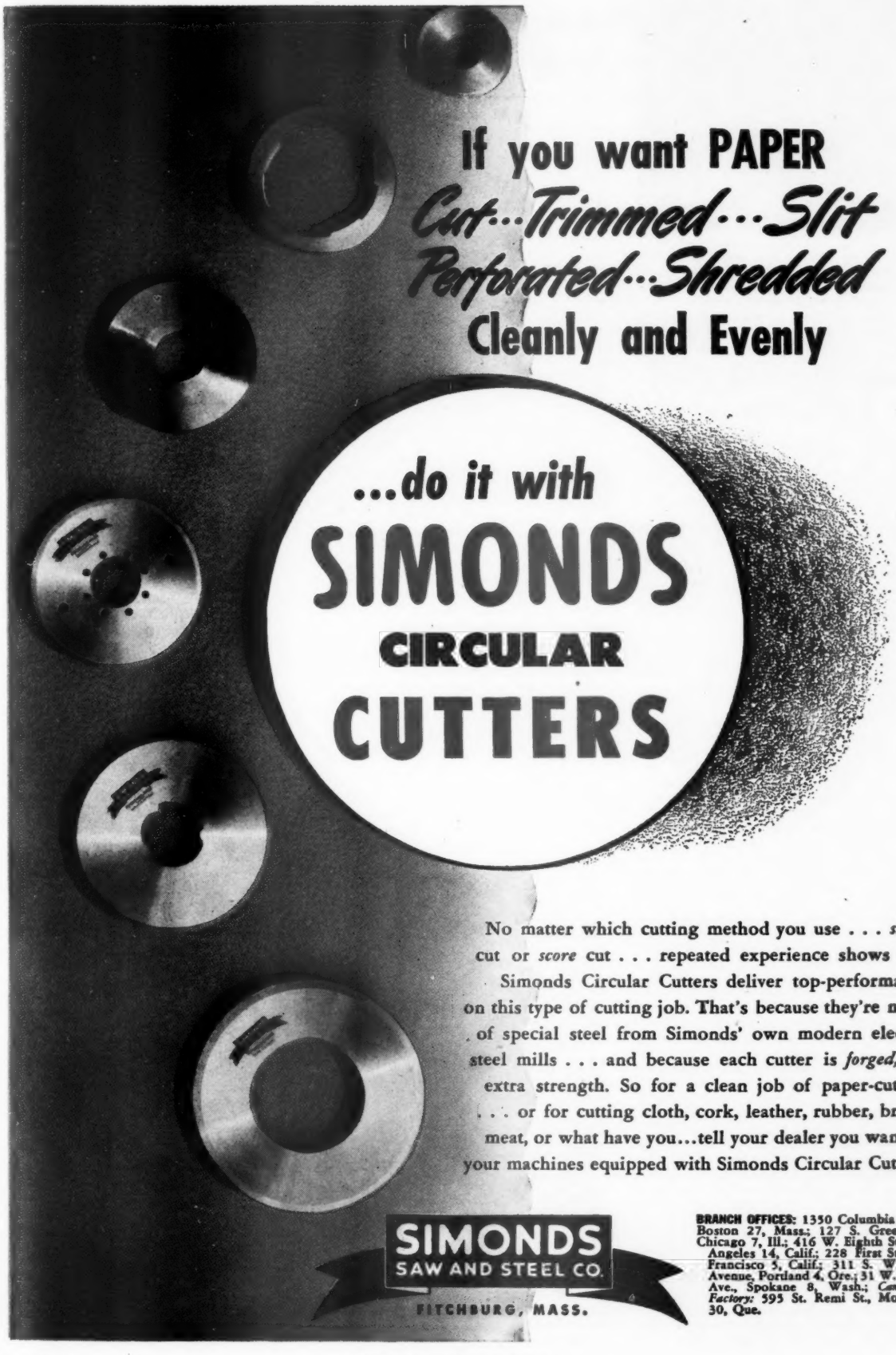
Those participating in the tours include outstanding members of the Chamber of Commerce, as well as the Rotary Club and similar organizations. Preceding each tour, visitors are guests at luncheon of T. T. Dunn, resident manager of the mill.

Newsprint Booster Dies

Carlton B. Short, 57, prominently identified with efforts to establish Southern newsprint mills as president of the Southern Publishers Assn,, and also as chairman of its newsprint mills committee, died June 14 in Washington, D. C. He was also general manager of the Roanoke, Va., Times-World.

Market Sought For Scrub Oak Chips

A possible market for scrub oak chips is being sought by C. H. Coulter, Florida State Forester. The Florida Experiment Station is currently turning out 29 tons of tan bark daily, plus 115 tons of the oak chips. Scrub oak grows extensively on cut-over pine lands. The tan bark provides a source of tannin, but use must be found for the chips if the process is to be economically feasible.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SUPT. JOHN BAUM (left), Standard Carton Co., Tacoma, Wash., observes and records temperature readings taken by IRA CROCKETT, machine tender, on dryer rolls with a Cambridge Surface Pyrometer. Mr. Baum came west from Three Rivers, Mich., and New York mills.

New Board Mill In Tacoma

Standard Carton Co., with both a carton plant and a paperboard mill at Tacoma, Wash., is gradually consolidating all of its operations at the present site of the paperboard mill, where the company has 32 city lots of land.

This project has been underway since 1944. At the end of that year the company started operating its own paperboard mill consisting of one beater, a jordan, and with a limited 60-inch drying section.

Prior to the end of 1944 Standard Carton Co.'s operations consisted of converting paperboard into folding paper cartons, but now the new paperboard manufacturing unit, already in operation, is being further equipped and eventually will make 64 tons per day.

A converting plant is in partial operation at the new mill site and the plan is to move the remainder of the folding-box plant equipment to the site for an unified operation. An additional jordan, beaters, and stock chests have been added subsequent to the original operation of the paperboard mill, which, according to Joe O'Reilly, manager, permits the combination of various types of pulp into better grades of boards. Capacity of the plant has been increased one-third over its original production.

Currently about 30% of the pulp used by Standard Carton is purchased and the remaining 70% is obtained from waste paper. From the resultant pulps, lined chipboard and folding boxboard is manufactured. These products are used extensively in the fruit-packing industry for both fresh and frozen fruit; for packing meat products, dairy products, and in the candy industry.

Mr. O'Reilly mentioned to PULP & PAPER INDUSTRY that his plant contributed materially to the production of linerboard for corrugating "V-boxes" during the war.

John Baum, a 40-year veteran of the pulp industry, is superintendent of the paperboard mill. Although seriously injured in a highway accident several months ago, he is now getting around the plant assisted by crutches. Mr. Baum worked for 20 years, previous to becoming affiliated with Standard Carton Co., in the plants of United Paperboard Co. of New York City, and Eddy Paper Corp., Three Rivers, Mich. At the latter he was plant superintendent.

Ira Crockett is machine tender at the Standard Carton paperboard mill.

Rayonier Gives Pins at Shelton; Half of Staff Worked Over 5 Years

Last month the Shelton mill of Rayonier Incorporated, which made the first bleached sulfite in Washington 19 years ago, officially swelled the ranks of its 15-year service men from 26 to a total of 83.

George Cropper, resident manager, and holder of a 15-year pin himself, awarded 201 5-, 10- and 15-year pins and announced that hereafter the Shelton mill would have a service pin dinner every year. As a result of this latest event, 247 employes are sporting pins and that accounts for 46.2% of the payroll.

A message from President Edward Bartsch, read by Mr. Cropper, thanked all who helped get Shelton back in operation, declaring the problems in accomplishing this were many and may have, at times, seemed insurmountable.

"We have emerged from the war with highly developed production techniques and at Shelton we have perfected a new process and a new pulp," said Mr. Bartsch, referring to the fact that the mill has adopted a unique ammonia base cooking system for making sulfite pulp.

W. B. Beals, chief justice of the state, and Robert M. Gilmore, of Olympia, safety supervisor for the Rayonier mills in Washington, also spoke.

Other guests included W. E. Breitenbach and Martin Deggeller, vice presidents of Rayonier; three others besides Mr. Deggeller and Mr. Gilmore from the Olympia central offices for the western mills—J. G. E. Ellis, engineering, and H. T. Fretz and Andy Gow, industrial relations—M. B. Houston and J. D. Sullivan from Seattle offices; Simon Posen, Central Chemical laboratory, Shelton; Lyall Tracy, manager at Grays Harbor, and Meder Johnson, assistant manager at Port Angeles.

W. L. Jessup, Shelton publisher; Horace Skelsey, local union president, and Mayor F. A. Travis were also present.

The 15-year pins went to:

Arthur Anderson, Leonard E. Attwood, William Austin, Curtis A. Battles, Harry C. Bell, William R. Bliss, Edward Buchanan, Jerome Burke, Oral Burnett, George R. Cardinal, Arnold L. Cheney, Charles S. Cole, Ernest Cole, Harry C. Cole, Raymond L. Collins, Ray L. Cook, Burke Cruson, Earl F. Dickinson, Paul W. Dittman.

Clifford L. Dunseath, George E. Durkee, John W. Eager, Arthur J. Ferguson, John David Getty, Clarence Gowan, Herman H. Heinold, T. Clint Houpt, Arthur H. Jackson, Kirk T. Jordan, William Kempton, August F. Lessard, Victor F. Libby, William R. Lunsford, John B. McBratney, William F. McCann, Alfred M. Michaelson, Robert Miller, Charles Norris.

Wm. C. Opalka, Robert N. Pollock, Cab Rains, Carl Rains, Thos. H. Robertson, Steve Rupert, James H. Rutledge, Winston Scott, Charles A. Seibel, Clyde A. Simmons, Walter J. Sivo, Martin B. Smith, Curtis J. Sowers, Henry Steensen, Elmer C. Sytsma, Ralph Wagner, Hagbert Wolden, George H. Woodard and Wendell G. Young.

GEORGE F. CROPPER, himself a 15-year pin holder and Resident Manager at the Shelton, Wash., division of Rayonier, passed out pins to 201 employes at recent dinner.

Madison Lab and 16 Of Staff Get Navy Honors

The U. S. Forest Products Laboratory, Madison, Wis., and 16 staff members were presented June 20 with certificates for Navy services. Rear Admiral G. F. Hussey, chief of the bureau of ordnance, commended the staff for research and development of pulp, paper, wood, and fiber products as well as adhesives, coatings, and plastics for naval ordnance uses.

A certificate for distinguished service went to the laboratory and certificates for exceptional service to former Director Carlile P. Winslow, Assistant Director, L. J. Markwardt, Parker K. Baird, Gardner H. Chidester, E. C. O. Erickson, Melburn Heinig, George E. Mackin, John C. Pew, Sidney L. Schwartz, Dr. Alfred J. Stamm, Rolf Thelen, T. R. C. Wilson, and Leslie A. Yolton. Certificates also were awarded to the late Dr. E. C. Sherrard and to Dr. Horace K. Burr and Herbert R. Meyer, who left the laboratory after the war..

Fellows General Manager Of Fitchburg Paper Co.

Carl M. Fellows has been appointed general manager of the Fitchburg Paper Co., Fitchburg, Mass., following his return from the Navy where he attained the rank of lieutenant commander.

Mr. Fellows was Northeast sales manager for the company prior to the war. A graduate of Annapolis, he was deflected from a lifetime naval career by poor eyesight, but Pearl Harbor changed all that.

Abitibi Modernizes

Now that Abitibi Power & Paper Co. is out of receivership and operating on its own again it is beginning to lay plans for modernizing and expanding some of its mills.

First step is installation of new wood grinding machinery at Abitibi's Thunder Bay Paper Co., Port Arthur, at a cost of more than $1,500,000.

The company plans to remodel all its wood-handling equipment.

Ackley Superintendent at Port Angeles; Edwards to Advise Tacoma News Mill

Appointment of Charles E. Ackley (picture on page 27) as paper mill superintendent at Crown Zellerbach Corp.'s newsprint mill in Port Angeles, Wash., is announced by R. A. Dupuis, resident manager at that mill.

He succeeds J. W. "Bill" Edwards, who has voluntarily retired after 38 years of service in the Crown Z organization under the company's recently instituted retirement plan.

Mr. Edwards is temporarily serving in an advisory capacity in the construction work at the West Tacoma Newsprint Co.'s recently acquired mill properties in West Tacoma, Wash.

As reported on page 33 of this issue, changes at this former book paper mill already are under way to convert it to production of 50 tons per day of newsprint. The conversion program is being carried out by Cellulose Engineers, Inc., of Seattle, and Mr. Edwards is serving on the staff of that organization.

When the program is completed and the mill is ready to go into production, about Jan. 1, Mr. Edwards will return to full retirement with his family at his home in Port Angeles.

Mr. Ackley's appointment came within a few days after his election to the fifth vice presidency in American Pulp & Paper Mill Superintendents' Association and he took over his Port Angeles' duties on July 1, after returning from the national convention of the superintendents in Poland Springs, Maine. Mr. Edwards had requested retirement several months ago but agreed to remain at his post until July 1.

Mr. Ackley was succeeded as superintendent at Crown Z's Lebanon mill by Elmer E. Davis (see p. 70).

Failing Is Acting Manager

W. L. Failing, former assistant manager, is serving as acting manager of Fir-Tex Insulating Board Co., St. Helens, Ore., since the death of Ray Simeral.

In Yachting Regatta

Charles Carter, steam plant engineer for Puget Sound Pulp & Timber Co., took part in the Pacific Yachting Regatta in Vancouver, B. C., recently on the crew of the 60-foot sloop *Circe*, which showed second in the final races.

Good Paper Market

The United States and England are far behind Iceland in the number of books required per person. Iceland publishes a book for every 466 inhabitants, England comes next with one for every 3,205, and the United States is hopelessly in the rear with one book for every 12,497.

J. W. "Bill" EDWARDS, veteran Paper Mill Supt. at Port Angeles newsprint mill of Crown Zellerbach Corp., who retired voluntarily as of July 1. He had served at Port Angeles for 20 years and had been with Crown Z 38 years, starting at West Linn, Ore.

Mr. Edwards is temporarily serving in an advisory capacity in the conversion of the old book mill at West Tacoma, Wash., to newsprint. His part in this project will probably end within about five or six months.

TAPPI FALL MEETINGS

As announced last month, TAPPI plans three national fall meetings this year, instead of just one as in the past. Approximate dates and locations were given in our June issue. These are now fixed as follows:

General meeting—Hotel Statler, Detroit—Sept. 26-28.

Engineering conference — Hotel Pfister, Milwaukee—Oct. 2-4.

Alkaline and by-products conference — Hotel Roosevelt, New Orleans—Oct. 14-16.

Jack Weiblen Ends Long Paper Career

The Pacific Coast paper industry lost one of its veterans June 28 in the death of John F. Weiblen, 57, assistant paper mill superintendent of Rayonier, Incorporated, Grays Harbor division.

"Jack" Weiblen worked in the industry almost 40 years, dating from 1907, when he started as roustabout at the Hammermill Paper Co.'s plant in Erie, Pa.

In 1929, as tour boss in the Erie plant, he and several other key men were transferred to the newly completed Hoquiam plant, then a Hammermill unit operated in connection with the Grays Harbor Pulp & Paper Co. This later became a division of Rayonier, Incorporated. Among those who came out from Erie with Mr. Weiblen are J. C. Mannion, superintendent; Lenus Pfeffer, superintendent of finishing; Hilary Obert, Frank Miner and others.

Mr. Weiblen is survived by his wife, Bertha, three sons and two daughters. Carrying on in the paper industry are all three sons, Foster Weiblen, backtender at the Grays Harbor plant; James, millwright at the same mill, and Jack, superintendent of finishing at Columbia River Paper Mills, Vancouver, Wash.

Canadian Industry Takes Loss On U. S. Dollar

Removal of the premium on the United States dollar July 5 will cost the Canadian pulp and paper industry roughly $24,000,000 a year, according to an unofficial estimate.

This development, following swiftly after an increase in wages to loggers resulting from the recent strike settlement and an increase in log prices averaging $4 to $6 per thousand, was particularly severe on the British Columbia pulp and paper mills.

In the past Canadian pulp and paper exported to the United States has been paid for in U. S. funds, which provided a premium of roughly 10%. This advantage was a factor in enabling the industry to operate during the war period on a satisfactory basis without sharp increases in the Canadian price to offset steadily rising costs of production. This advantage has now been eliminated, and while the prices of both pulp and paper have been increased during the past few months the new prices do not compensate the industry for increased costs, and now the removal of the dollar premium means even less revenue.

The fact that Canada's exports to the United Kingdom and some other countries were also based on the U. S. dollar makes the situation even less favorable. Instead of the sales actually to the United States alone being affected, practically the whole export market is subject to the new dollar value, without exchange premium. Incidentally, the United Kingdom will find it more difficult to purchase pulp and paper in Canada because of the arbitrary re-valuation of the British pound sterling in relation to the Canadian dollar at $4.02, for the buying rate and $4.04 selling. The former rate was $4.43 buying and $4.45 selling.

Value of all paper exports from Canada was $160,825,462 in 1943, the last year for which complete records are available. Newsprint accounted for $144,707,065. Value of woodpulp exports was $100,012,775.

In 1945, British Columbia exported to the United States almost $4,000,000 worth of pulpwood, pulp and similar products used in making paper, and $10,800,000 worth of newsprint, or a total of $14,800,000. Removal of the U. S. dollar premium will thus reduce revenue from this source at the rate of approximately $1,480,000.

Joins Lebanon Mill

William G. Daggett, an Oregon State graduate, has joined the office force at Crown Zellerbach Corp., Lebanon, Ore., as a junior accountant.

Accident-to-Employes Ratio Cut From 1-5 to 1-20 In 25 Years, Hartwig Tells Camas Pin Dinner

Ladies were honored, too—along with their husbands—at Camas pin dinner.

Top row (left to right): Chairman Louis Bloch congratulates John T. Ough, mill janitor and 45-year pin winner; Mrs. Hanny and Resident Mgr. John E. Hanny, 35-year pin winner.

Second row (l. to r.): Otto Hartwig, principal speaker; Mrs. Michaelis and Otto Michaelis (35 years), asst. sulfite supt.; O. B. Koplin (35 years), watchman.

Lower row (l. to r.): Mrs. Allen and Henry G. Allen (40 years), machine tender; Harry E. Jones (40 years) steam plant maintenance man, and Mrs. Jones; Mrs. Kaplin and Mrs. Ough, whose husbands are shown above.

Safety was the theme at another pin dinner on June 13 for employes of the Camas, Wash., mill of Crown Zellerbach Corp., and so—most appropriately—the veteran general safety director for that far-flung organization, Otto Hartwig, was tapped for the principal address.

In 1920, one out of every five employes at Camas could expect to be injured in a lost time accident during the year, but by 1945, only one of every 30 employes faced that prospect.

"That's a lot better, but we're not satisfied yet," said Mr. Hartwig. He observed that while 265,000 of American youth suffered death in combat in World War II, a total of 355,000 persons in this country were fatally hurt in accidents in factories, homes, on farms and highways. The spread in regard to injuries was even greater—650,000 wounded or disabled in war as against 36,000,000 injured in this country, according to Institute of Life Insurance figures.

Louis Bloch, Crown Z chairman, presented 272 pins, representing 3830 years of service. W. D. Welsh, executive assistant in San Francisco, did his customary toastmastering, and Vic Gault, personnel supervisor at Camas, welcomed the dinner guests to the fine dinner prepared by the grade school parent-teachers group.

John E. Hanny, resident manager, was one of the 35 year pin winners. It was pointed out that he and John T. Ough, the 45-year winner and janitor, were among winners who had also gone through their entire period of service without any lost time accidents.

Earlier in that day, at a ceremony in front of the office, James Greene, Washington state American Legion commander, presented a citation to the Camas mill for employing 604 World War II veterans (30% of male personnel), including 272 veterans not previously employed at the plant. Mr. Bloch received the award.

Principal pin winners: John T. Ough (45 yrs.); Harry G. Allen, Harry E. Jones and J. Verne Wallace (40 yrs.); J. E. Hanny, Orpheus B. Koplin and Otto F. Michaelis (35 yrs.), and Cecil I. Knapp, Harold R. Nevin, Albion Rodgers and James A. Wright (30 yrs.).

Gus Ostenson, paper mill superintendent, was one of the 25 year pin winners. Others were:

Carl A. Arvidson, Charles Bechly, Ralph M. Blake, Carl H. Brummitt, Timothy H. Conway, Rufus F. Corey, John O. Devlin, Louis S. Franklin, Gola A. Fine, Marion L. Hall, John W. Horning, Clyde E. Johnson, Gustaf A. Lorenz, Fred Noyes, H. Dale Olds, Frederick W. Palmer, Andy F. Rekdahl, Edward O. Rice, Irvin O. Rice, Oscar O. Sadd, Harvey Sherk, Vernon E. Shoemaker, Cloice W. Timmons and Grant Waldorf.

Pete Massey Retires

C. Carr Sherman, president of H. P. Smith Paper Co., Chicago, announces retirement of Peter J. Massey as vice president. Mr. Massey is continuing as a director of the company and in an advisory capacity.

Mr. Massey joined Smith in 1940 and during Mr. Sherman's absence in the armed forces, acted as general manager. Mr. Massey is well known for having participated in developing the on-the-machine coating process at Consolidated Water Power & Paper Co. over a decade ago, now also licensed to Crown Zellerbach, International and other companies.

Improvements Made At Scott "Home" Mill

Scott Paper Co., Chester, Pa., is extending its pulp unloading pier 200 additional feet, and recently took delivery of six new steel lighters for the delivery of pulp.

West Linn Veteran Dies

Otto Erickson, who was 50 years on the rolls of Crown Zellerbach Corp., and all of that time at the West Linn, Ore., mill, where he helped in construction and carried on as maintenance man, died early this month. He was 79.

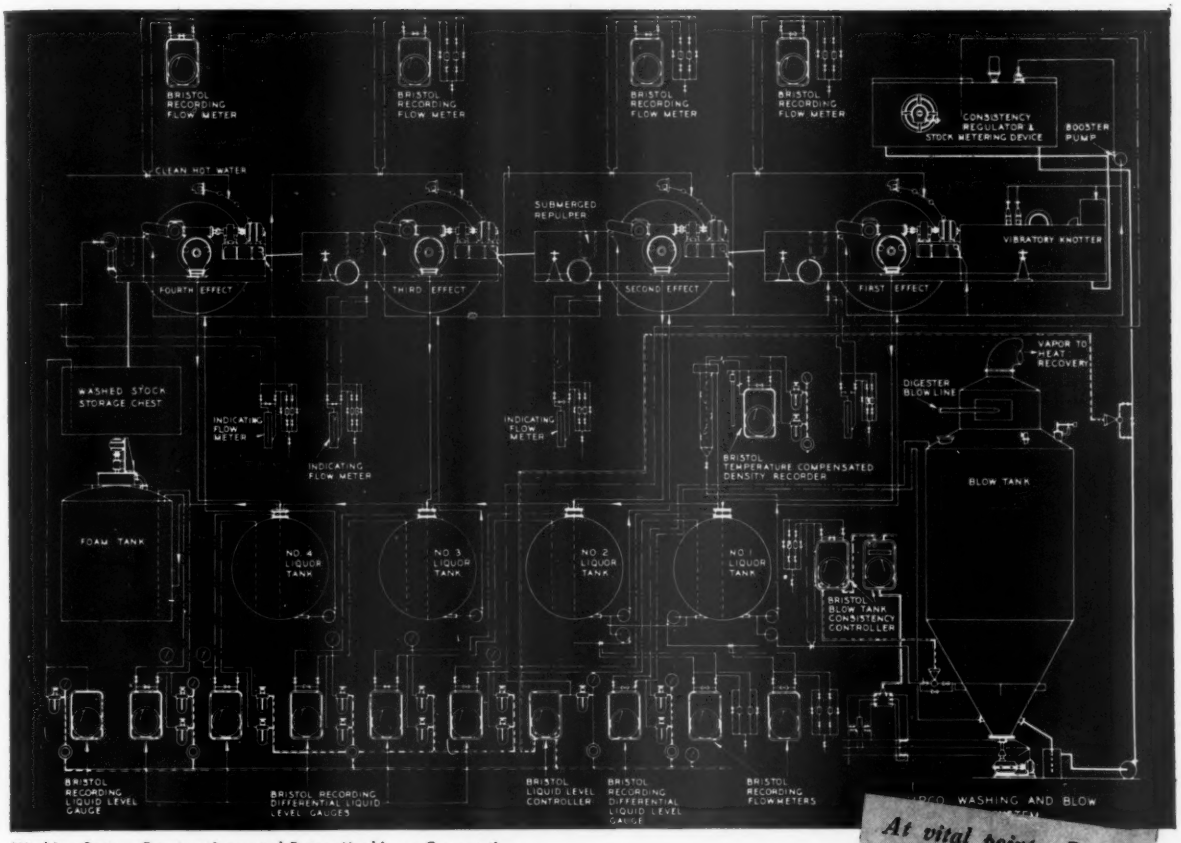
Spokane Division Sales Mgr.

Lt. Col. Grover Wilson, in the Army since Pearl Harbor, has doffed his khaki uniform, and returned to the Zellerbach Paper Co. as sales manager, Spokane division. Mr. Wilson participated in many campaigns, including the Italian, where he distinguished himself as a Major, by accepting the surrender of the city of Messina in Sicily.

"Bus" Banks, who formerly held the position of sales manager, Spokane Division of the Zellerbach Paper Co., has been transferred to the Sacramento division.

Moves to Mexico

Chris Wright, formerly beater foreman of the Beauharnois division, Howard Smith Paper Mills, Ltd., and at one time with E. B. Eddy Co. at Hull and the Bathurst Power & Paper Co. at Bathurst, N. B., has been appointed paper mill superintendent of Empaques de Carton Titon S. A. in Monterrey, Mexico.



Washing System Courtesy Improved Paper Machinery Corporation

At vital points, Bristol instruments record and control the flow through this modern system of stock washing.

HOW TO GET MAXIMUM RECOVERY OF "BLACK LIQUOR" WHEN WASHING KRAFT

In the processing of Kraft or Brown stock, complete removal of "black liquor" from the pulp fibres is of vital importance.

Thorough washing of the pulp with hot water is required to produce a pulp of acceptable color. Yet the amount of water must be kept to a minimum in order to keep the liquor strength up. The material balance of both liquid and pulp must, therefore, be maintained within close tolerances.

An effective solution to the problem is found in the accompanying diagrammed process. Note that Bristol equipment plays a major part in maintaining the necessary balances throughout this system.

Bristol Flow Meters enable positive regulation of the dilution factor. The saving in evaporation heat pays for their cost many times over. Bristol Liquid Level Gauges tell when the lowering of the level in a tank means that some part of the system is being starved, calling for adjustment. A Bristol Consistency Controller on the blow tank assures proper dilution and dispersion of the fibres, while other Bristol Instruments have important functions.

Here, in a single system, is striking evidence of Bristol's wide-ranging usefulness in modern process control. For further information, write for literature. Address THE BRISTOL COMPANY, 142 Bristol Road, Waterbury 91, Conn. (The Bristol Co. of Canada, Ltd., Toronto, Ont., Bristol's Instrument Company, Ltd., London, N.W. 10, England.) West Coast: Branch Factory — 40 Berry St., San Francisco 7, Calif., Branch Office — White Bldg., Seattle 1, Washington. Lake Region: *Branch Factory and Office* — 351 East Ohio St., Chicago 11, Ill., Southern States: *Branch Office* — Comer Building, Birmingham 3, Alabama.

BRISTOL

Engineers process control for better products and profits

AUTOMATIC CONTROLLING AND RECORDING INSTRUMENTS

Committees Named For 1946 Hi-Jinks

"Bigger and Better Than Ever" is the watchword for the 1946 edition of the Paper Mill Men's Club annual Hi-Jinks, to be held Sept. 20 at the Riviera Country Club, Santa Monica, Calif.

Hi-Jinks Chairman Irving Damon, Northern Paper Mills representative in Los Angeles, will be assisted by Jack Leiser, Pioneer Wrapper Co., vice chairman; Chet Gunther, Crown Willamette, finance; George Skleba, Dixie Vortex Co., entertainment; J. C. Fisher, Sherman Paper Products, golf, with Roland Wolf, California Cotton Mills, golf vice chairman; Merle M. Paup, Comfort Paper Corp., door prizes; Neil B. Sinclair, Sinclair-Lang Co., reservations; Robert T. Boardman, Cords, Inc., softball; Ben H. Bahnsen, California Cotton Mills, arrangements; William McBride, U. S. Envelope, program; Fred Schroeder, Sealright Pacific, director of activities.

Golf sweepstakes will be handled by Paul R. May, Pomona Paper Products Co., chairman, with Harry Huntsman, Western Waxed Paper Co., L. A. Gardner, Nekoosa-Edwards Paper Co., and John Kirby, John Kirby Co., as committeemen.

The Hi-Jinks is the climax of the year's activities for the Paper Mill Men's Club of Southern California, a strictly social organization of paper mill men.

Crawford In India

Jackson Crawford, formerly assistant to the technical director, Howard Smith Paper Mills, is now in India as engineer in charge of the Orient Paper Mills Ltd., producing bamboo and rag pulps. At present he is supervising construction of a new plant which will double capacity.

Bowaters Bonds Sold

Dominion Securities Corp. and the First Boston Corp. arranged the sale, recently, without public offering of a $7,500,000 issue of Bowater's Newfoundland Pulp and Paper Mills first mortgage bonds, series 1946, 3½%, due on Jan. 1, 1968.

Espanola Foreman

E. G. Wilson, formerly bleach plant operator at Ocean Falls, B. C., for Pacific Mills, Ltd., has gone east to become bleach plant foreman at Espanola, Ont., for Kalamazoo Vegetable Parchment Co.

Night Premium Approved

A new principle of paying night premiums by four British Columbia pulp and paper companies has been approved in a decision rendered by Canada's National War Labor Board.

The companies and the unions affected had made a joint application for authority to pay workers on night shifts a premium of three cents an hour. The regional board had held that inasmuch as the premiums had not been paid in the past and the companies were not engaged in war work the application could not be sustained, but the National Board took a different view and allowed the appeal. The premium, however, is not to be added to wage rates in calculating overtime.

Companies involved were Powell River Co., Pacific Mills, British Columbia Pulp & Paper Co., and Sorg Pulp Co.

Strike for Paper Cups

A demand for paper drinking cups was cause of one of the nation's most unusual strikes. Bricklayers, plasterers and all other workers, acting in sympathy, walked off a big apartment house construction project in Cambridge, Mass.

The builder gladly substituted paper cups for the old tin pail and dipper as soon as he found out the trouble and everybody was happy again.

Canadian Official Sees Market Division Problem

Distribution will be the major problem of the Canadian pulp and paper industry during the coming six months, in the opinion of Robert M. Fowler, of Montreal, who recently made his first visit to the Pacific coast in his capacity as president of the Canadian Pulp and Paper Association, a post to which he was appointed early this year.

While on the coast Mr. Fowler conferred with leaders in the industry, visited some of the mills and gained a first-hand impression of conditions affecting operations in British Columbia.

Mr. Fowler says that in the east manpower and equipment supply is gradually improving, but with government controls off the industry at the beginning of 1947 except in respect to domestic price and the maintenance of adequate supplies for the Canadian market he expects that there will be a good deal of temporary disruption over the distribution of the industry's products.

Sidney Roofing Adds Storage and Dining Rooms

Sidney Roofing & Paper Co., has been authorized by the city of Victoria to make a $90,000 addition to its plant on Victoria waterfront.

Most of the space in the new building will be for storage purposes. The warehouse covers an area of 72x47 feet. The small second floor will accommodate kitchen, dining room, tiled rest rooms, locker space for 50 employees, and will lead onto a sun porch, which will provide outdoor dining facilities in warm weather.

Opens P. R. Office

Frank Block & Associates, public relations firm, has opened offices at 30 Rockefeller Plaza, New York City, and 809 Ambassador Ambassador Building, St. Louis, Mo., "chiefly to handle pulp and paper problems," according to Frank Block, who heads the firm.

Mr. Block conducted the first waste paper campaign in the U. S. as secretary of the American Industries Salvage Committee. He is also well known through his activities as director of the War Activities Committee of the Pulpwood Consuming Industries. Associated with him in the new enterprise are Jesse Siegel, John F. Kinerk, and L. Daniel Blank.

Richard Pace Joins Florida Mill

Richard Pace, son of A. D. Pace, vice president and director of the Florida Pulp and Paper Co., Cantonment, Fla., has become an employe at the mill following his release from the naval air forces. Mr. Pace is a graduate in business administration from Dartmouth College, and entered the air forces of the navy in July, 1941.

Fernandina Board Mill Delayed Till End of '47

Shortages of materials and labor have been delaying work on Container Corp. of America's $4,500,000 expansion program at the Fernandina, Fla., pulp mill.

C. R. Hunsiker, resident manager, said, "we will consider ourselves extremely lucky, if our new facilities are in operation by the end of 1947."

Plans were announced last December calling for erection of a new building and installation of a new machine for the manufacture of paperboard. Foundations have been laid and some steel framework erected.

The Fernandina plant will continue to manufacture pulp at the present rate, and there will be equivalent new paperboard production.

Power Expansion Studied by Pacific Mills

In anticipation of further expansion, Pacific Mills, Ltd., is considering the development of a power project on the Nascall River, to the east of Ocean Falls, B. C., at an estimated cost of $2 million. It also would improve the company's water supply.

H. G. Acres & Co., consulting engineers of Niagara Falls, Ont., who recently completed a survey of Campbell River power, which will be utilized for the Bloedel, Stewart & Welch pulp mill at Port Alberni, have been retained to investigate the proposed hydro electric power development on the Nascall, according to Pacific Mills President Paul E. Cooper.

The proposal is to harness the Nascall at the point where it enters Dean Channel, some 30 miles from Ocean Falls, where Pacific Mills operates. Engineers are already on the site.

It is estimated that the Nascall River power development would produce about 15,000 horsepower, delivering about 10,000 kilowatts of power.

$100 Prize for Idea

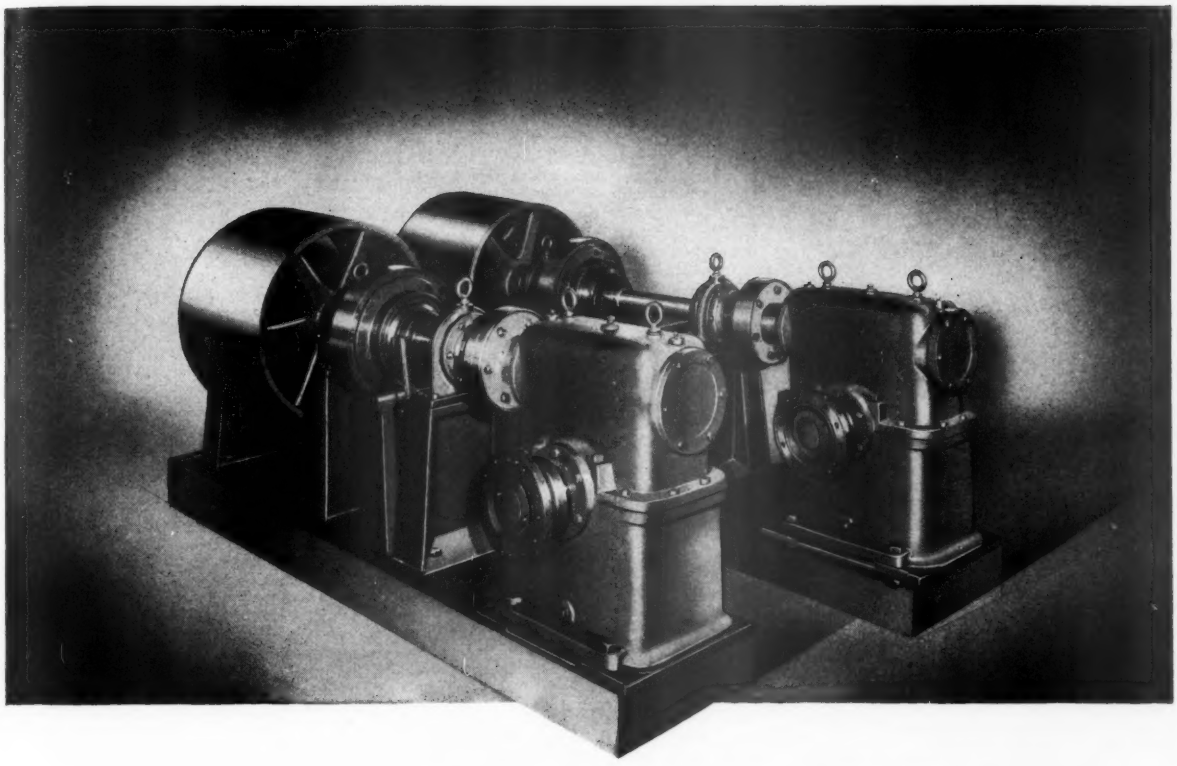
T. Easton, a machinist at the Ocean Falls, B. C., plant of Pacific Mills, Ltd., has won $100 for a suggestion that a steel band be placed around graphite rings on paper machines steam joints to prevent the rings from falling apart when fractured by vibration. The suggestion will effect considerable savings.

Canadian Wood Shipment Banned in I. P. Deal

Embargo on shipments outside the province of wood cut in the forests of Quebec is an important feature in an exchange of forest lands made recently by the Quebec government and Canadian International Paper Co.

The land exchange was based on legislation enacted at the last session of the Quebec legislature. It provides that the company relinquishes large stretches of Crown lands previously allotted to it, plus some freehold lands ownd by the company, all located on the Gaspe peninsula. In return, the company obtains forest lands in closer proximity to its mills.

The agreement provides that the company is not to export from Canada any wood cut from the concessions, and is not to ship from Quebec to any other province any wood without the consent of the provincial government.



Bagley & Sewall NEW ASSEMBLED DRIVES

• An enclosed Worm Gear Unit, Magnetic Clutch and Cone Pulley, as illustrated above, is only one of several different variations of Bagley and Sewall Floor Drives as assembled of standard stock parts. Depending upon speed, ratio and power requirements of each application, the units may be composed by using Hypoid Gears or Spiral Bevel Gears instead of Worm Gears; also, the clutch may be of any type Friction Disc, Magnetic or Airflex. Instead of a cone pulley other types of variable or fixed speed methods may be employed.

BAGLEY B&S SEWALL

THE BAGLEY & SEWALL COMPANY

Builders of Paper Making Machines

WATERTOWN, NEW YORK

Perkins-Goodwin

(continued)

Richard W. Wortham, Jr., vice president of Southland Paper Mills, Lufkin, Texas, read a touching and sincere tribute to Lou Calder and the Perkins-Goodwin Co. in behalf of Ernest Kurth, president of Southland. His connection with the two, Mr. Kurth said, had come relatively late in life (their association has been 10 years) but it meant all the more for that reason.

The great connection between Perkins-Goodwin and the newsprint industry of the South was ably expressed by John E. Ewing, Shreveport and Monroe, La., publisher, who is said to have brought forth the idea of a southern newsprint mill years before the building of Southland. In the development of southern newsprint, Mr. Ewing placed the varied work of the late Dr. Herty, and of Mr. Kurth and Mr. Calder, all on the same plane.

Roy K. Ferguson, president of St. Regis Paper Co., stated that the record of Perkins-Goodwin was one of "notable and distinguished service to the development of the pulp and paper industry." Speaking in a broader vein, he took occasion to hope that in the future, as the industry stands on the threshold of a new era, there will not be thoughtless over-expansion. "We must think not only of our own companies," he said, "but of the industry as a whole and the public at large."

When the speakers concluded, Toastmaster Schofield read a few of the letters and telegrams and cables which had flooded in to Perkins-Goodwin from all over the world—from such men as the famous German papermaker, Hans Gottstein, now in London, and such firms as the widely known John W. Dickison Co. of London.

The attendance at the centennial banquet itself was colorful evidence of the influence and contacts of the company. Elderly heads of great companies mixed with young executives from pulp and paper companies and all its allied ramifications of the industry.

It was a swank and gala occasion done in a style and setting suitable to the occasion. When Lou Calder rose to acknowledge the speeches on behalf of his company and his associates, the men and women in the vaulted ball room rose, too, in sincere applause for him and his organization and its meaning in a hundred years of world-wide history in the pulp and paper industry.

Net Profit for 1946 May Double 1945

Indications are that St. Regis Paper Co.'s sales for the first six months of 1946 will approximate $33 million. The net income is estimated at around $2.3 million, equal, after preferred dividends, to slightly over 50 cents a share on the 4,120,714 shares of common stock outstanding.

This would compare with sales of $52,500,824 in all 1945, when net profit amounted to $2,211,411, equal to 45 cents a share on the common.

Net for the first half of 1945 approximated $1.5 million, but dropped to a little over $700,000 for the second half of that year. Reasons for the decline included delayed reconversion and low production levels in the refrigerator industry, the chief customer.

It is estimated that sales and profits in the second half of this year will exceed those for the first half. Sales for 1946 may approach $70 million, with net profit approximating $5 million, or around $1.10 a share on the common.

Named Plant Engineer

G. H. Kirby, formerly chief engineer of Canadian Car munitions plant at Riverbend, Quebec, has been appointed plant engineer for Rolland Paper Co. at St Jerome, Quebec.

Scoular at Thorold

William Scoular, consulting engineer for Powell River Co. during the past year, has been appointed engineer for Ontario Paper Co., at Thorold, Ont.

Canadian Boxes, Ltd., Expands Operation

A construction and increased operation program for Canadian Boxes, Ltd., subsidiary of Pacific Mills, Vancouver, B. C., is to be completed by April 1, it is announced by President Paul E. Cooper. Estimated cost is $100,000.

"The present concrete building located on Industrial Street east of Main will be extended and remodeled to provide an additional 7,000 sq. ft. of factory space," says Mr. Cooper.

Solid fiberboard manufacturing is being moved from Pacific Mills' plant in Vancouver to Canadian Boxes. Laminating and pasting of fiberboard is being moved from Pacific Mills' Ocean Falls plant to Canadian Boxes. Production of solid fiber and corrugated containers will amount to 15,000 tons annually.

Blake, Moffitt & Towne's New Personnel Manager

Lee J. Dellwig has been appointed personnel manager of Blake, Moffitt & Towne.

Mr. Dellwig comes to his new post with an extensive background in the field of personnel and industrial relations work. At the outbreak of hosilities he was sent to Pearl Harbor as personnel manager for a corporation which had the responsibility of raising the battleship *Oklahoma*, and other ships sunk in the Dec. 7 sneak attack. Later he entered the government service and was assigned to the staff of the commanding general, Pacific Ocean areas. In 1944 he received special personnel management training at the University of Pennsylvania and once again returned to Honolulu.

His activities with Blake, Moffitt & Towne will include visiting all the company's divisions on the Coast but his office will be in San Francisco headquarters.

Warns Mississippi On Industry Loss

Through carelessness and ignorance Mississippi is in the process of slowly choking to death one of its greatest industrial groups—the manufacturers of products derived from timber, Brooks Toler, of Laurel, Miss., chief forester for the Masonite Corp., warned members of the Hattiesburg, Miss., Kiwanis Club.

Mr. Toler, former veteran of both the Mississippi and Alabama state forestry departments, said that unless the people in the state wake up and realize the major role timber plays in Mississippi's economic life, forest products manufacturers will be forced to leave the state because of the lack of raw materials.

Johnstone Opens Pennsylvania Plant

Johnstone Engineering & Machine Co., manufacturers of slitters, winders and rewinders, have recently opened their own manufacturing plant, with offices, engineering and sales departments at Parkesburg, Penn., which is on the main line of the Pennsylvania Railroad, 44 miles west of Philadelphia.

Patterson Moves

Hunt Patterson, since Jan. 1, 1941, a representative of Zellerbach Paper Co. in the Coos Bay, Ore., area, transferred to Portland, Ore., as of March 1. While he served in the army, his wife served the territory.

Papermaking—Science or Art?

By
Dr. Frederick Frost

Director,
Research Laboratories,
S. D. Warren Co.,
Cumberland Mills,
Maine.

(This paper was presented at Superintendents' Convention last month at Poland Spring, Maine.)

The New England Council during May held a conference at the Hotel Statler in Boston on the subject of research. Research was discussed from many different points of view but in nearly all cases the speakers agreed on the basic nature of research. Research was defined as a systematic search for new knowledge.

There are, of course, many different forms of knowledge. From a research point of view I think there are two major types. In one case research discovers specific facts and in the other case research not only discovers these facts but in addition is able to relate them together so that a series of facts become understood as a group.

In the manufacturing of paper, for example, we may find that there is a definite correlation between the consistency of the stock at the headbox and the formation of the paper. This is a fact, but is an isolated fact. If we can further pursue our studies and determine why this situation exists we are reaching the ultimate end of research.

For years papermaking has been an art. Experts in papermaking without being able to explain the intercorrelation of the many variables are nevertheless able to make good paper. It is my belief that papermaking will become a science only when each variable of the process has been measured and defined and when the relationship between each variable is thoroughly and completely understood.

Papermaking is a very complicated procedure and a complete discussion of the variables involved would be entirely out of the question, even if I had the knowledge to make such a discussion intelligible. I should, however, like to take a phase of papermaking and see if it is possible to make a reasonable explanation of the interplay of variables. I should like to offer for your consideration an explanation of formation.

If we have a sheet of paper which is composed of fibers which are all equally spaced from each other, such a sheet will have a perfect formation. If, however, these fibers are bunched or grouped in flocs we have a wild formation. The problem, therefore, in producing a sheet of paper with an excellent formation is one of producing a sheet in which the distribution of the fibers is very even. In other words, the fibers must be dispersed.

I think you will agree with me there is a very close parallel between the operation of coating paper and the operation of making paper on a paper machine. In the process of coating, pigments and adhesives dispersed in water are spread evenly and uniformly upon an absorptive web of paper. In the process of mak-

ing paper on the paper machine we attempt to spread a dispersion of fibers and water evenly and uniformly on an absorptive wire. The techniques, of course, differ in both processes although spreading coating with a scraper blade very closely parallels the spreading of a film of fibers and water with a slice.

There is one main distinction. In coating techniques the mineral particles in the coating and the adhesive in the coating are dispersed or peptized before the coating is spread on the paper. Flocculated coatings in which the materials used are aggregated into loose groups are considered unsatisfactory for coating. If coatings of this type were used the coating would be patchy and the distribution of the coating on the sheet very uneven.

The papermaker, on the other hand, is generally not disturbed when his suspension of fibers in water is flocculated into groups before his coating is spread by the slice on the wire.

It seems to me that if it were possible to peptize or disperse fibers and water and maintain a stable dispersion such as is maintained in coating, there would exist no problem in formation at all. If we spread a layer of water and fibers over a wire and if every fiber repels every other fiber then every fiber will be equally spaced or distributed in the film of water over the wire. If we then remove the water from the wire the fibers must settle on the wire in a pattern of perfect dispersion.

If, on the other hand, our fibers are flocculated in a layer of water spread across the surface on the wire and the water is then drained through the wire the distribution of fibers will follow the pattern of flocculation and the sheet will be wild and will have a very poor formation.

In the old days before high speed operation of paper machines was in vogue good formation was obtained by the following process:

First, the fibers were allowed to coagulate to any degree in the headbox.

Second, the stock was hydrated to an extent that the rate of drainage of water from the stock was slow, so that the film of water and fibers which was deposited on the wire remained in a liquid condition as the stock was carried down the wire.

Third, while this liquid film of fibers and water was held on the wire by hydration mechanical agitation was supplied by the shake and this mechanical agitation broke

up the fiber flocs and mechanically dispersed the fibers in the layer of water. When the water was finally removed the distribution of the fibers was uniform and regular.

As much water was carried to the wire as was possible. The consistency was low because it was found that it was easier to mechanically disperse a fiber floc as the consistency was reduced.

In this operation formation was obtained almost entirely by a mechanical dispersion produced by the shake. The effectiveness of the shake in dispersing fiber flocs was controlled by the hydration and by the proportion of water to fibers.

Today with high speed operation it seems to me the situation is quite different. We have not lengthened out our wires in proportion to our increase in speed. We have less time for the shake to operate on the film of water on the wire. We have had to decrease our hydration so the drainage of water through the wire is more rapid and we have had to increase the consistency of the stock on the wire. All these factors are detrimental to formation if we attempt to operate on the theory which was used when paper was made at slow speed.

Is it possible to completely alter our concept of papermaking operation and to devise a plan which will allow us to obtain excellent formations at high speeds?

Suppose it were possible to obtain in the pond directly behind the slice a nearly perfect dispersion of fibers in the water. This would be then comparable to the dispersion of mineral pigment and ahesive which exists in a coating just prior to coating. If we then spread this dispersed suspension of fibers on the wire our only problem in obtaining a perfect formation would be to drain the water away from the fibers before coagulation could take place.

On this basis our desire would be to have a stock which does not hold water because the more quickly we can drain the water away from the fibers the less time they will have to flocculate. We do not need a shake to break up flocs at all. The only purpose of the shake in such a system would be to prevent flocculation from occurring. The faster we run the less time there would be for flocculation to occur and the less need there would be for a shake. We would still, however, find the consistency of the stock would be a troublesome feature because it can be demonstrated that as the consistency of the stock increases the rate of fiber coagulation also increases. It also can be demonstrated that as the consistency of the stock increases it becomes more and more difficult to disperse the fibers in the water. Our high speed paper machines, therefore, must be able to remove large quantities of water from a free stock. The action of the shake may help in this requirement.

It seems to me, therefore, that if we are to obtain a positive control of formation in high speed papermaking operation our first requirement will be a method of dispersing our fibers uniformly in the water just prior to the slice or just before we spread the water on the wire. If we can do this then it should follow that the higher our speed becomes the better our formation will become because there will be less time for flocculation to occur after the stock leaves the slice. Unless the shake is essential for aiding in the removal of water it seems reasonable to suppose that as our speeds increase the necessity for a shake will be eliminated.

There are two major approaches which are open to obtain a perfect dispersion of fibers and water in the pond directly behind the slice. One approach is a mechanical approach. We need some new method of mechanically applying a force to a suspension of water and fibers which can be installed in the pond and which will effectively disperse the fibers without causing irregularities of the flow of stock under the slice. If such a method can be designed the problem of obtaining excellent formation at high speed should be largely eliminated if we are not forced to increase the consistency to a point where flocculation will take place after the dispersed stock is spread on the wire.

The other approach is chemical. If it were possible to peptize by chemical means the dispersion of fibers and water so that every fiber repelled every other fiber then flocculation could not take place. No agitation would be necessary and regardless of speed or the amount of water carried, as long as the amount of water was sufficient to separate each fiber, our formation would always be perfect.

It is my belief that much fruitful work could be done in developing a high speed paper machine which would operate on the principal of mechanically dispersing the fibers in the pond and I further believe much fruitful work could be done in developing chemical methods of dispersing fibers.

If it were possible to develop one

or both of these methods it would seem to me that we could change that part of the paper operation which controls the formation of a sheet from an art to a science and this accomplishment would mean that the problem of consistently producing sheets of excellent formation at high speed would be solved.

The paper industry is rich in talent. If this talent is directed towards the solution of this problem it seems certain an answer would be found. Is it possible we have not found this answer because we have not given sufficient thought to the fundamental theory of high speed paper operation?

Fibre Making Processes Has New Barking Drum Bar

Fibre Making Processes, Inc., with offices in San Francismo, Chicago, and Fort Erie, Ont., have developed a new end bar for their FMP barking drums .

The new bar, instead of being U-shaped, is M-shaped and is made of cargon steel. Due to its shape, company officials state that the new M-bar is twice as strong as the U-bar.

Twenty-two indirect heating systems are on order with Fibre Making Processes from United States, Canadian, and foreign kraft mills. Also the company has twelve barking drums on order.

For recovering the heat and steam from digester blowers in kraft mills, the company is building five blow steam condensers.

End of Paper Shortage Not In Sight, Despite Reports

During past weeks there have appeared a number of wire stories in the daily press indicating that the end of this year would see a considerable let-up in the paper shortage.

But a round-up of opinion in Washington, D. C., and New York City by PULP & PAPER INDUSTRY indicates the current outlook on paper production for the third quarter is not nearly as optimistic as it was a few weeks ago. The principal factor in the change of minds is the failure of Swedish pulp to materialize either in the quantities or with the promptness that was expected in some quarters. There have been large cancellations of second and third quarter Swedish pulp contracts, it is reported, and imports in recent weeks have been piddling. Consequently, some mills depending on this pulp face curtailments.

It was believed in some circles that Swedish importers were shipping to other markets, awaiting the aftermath of OPA legislation and hoping for higher prices. There are unconfirmed reports the Swedes can still supply around 500,000 short tons for the balance of the year and are tentatively holding out. These opinions were vigorously denied by some Swedish importers who again pointed to international problems in Sweden which, they say, prevents full production.

July U. S. production was expected to be seasonally down, and there were reports of reductions on third quarter allocations. This was partly due to production let-down, but renewed buying of the Army and Navy was definitely reported to be entering the picture. For the most part, the military since V-J day have been getting along on inventories.

Paper supplies in the second quarter were closer to consumption needs than in the first quarter but a substantial deficit margin is still estimated to exist, and a quick end to the paper shortage seems unlikely. All that can be said now is that once consumption needs are satisfied, inventory replacement will exert its pressure.

ELMER E. DAVIS, who has become Superintendent of the Lebanon, Ore., division of Crown Zellerbach Corp., serving under Malcolm J. Otis, Resident Mgr. Mr. Davis succeeded Charles Ackley upon the latter's assignment to other important duties in the organization.

Mr. Davis joined Crown Z at Camas in 1911 and during 35 years has served also in the West Linn, Ocean Falls and Port Townsend mills, returning to Camas in 1944 where he has been preparing for two years for the move to Lebanon.